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Vascular Plant Identification Guide

Chugach National Forest

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VASCULAR PLANT IDENTIFICATION GUIDE CHUGACH NATIONAL FOREST

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TABLE OF CONTENTS

INTRODUCTION		1
TREES		3
<i>Betula kenaica</i>	Kenai birch	4
<i>Betula papyrifera</i>	paper birch	4
<i>Chamaecyparis nootkatensis</i>	Alaska yellow cedar	5
<i>Picea glauca</i>	white spruce	5
<i>Picea X lutzii</i>	Lutz spruce	6
<i>Picea mariana</i>	black spruce	6
<i>Picea sitchensis</i>	Sitka spruce	7
<i>Populus balsamifera</i> subsp. <i>balsamifera</i>	balsam poplar	7
<i>Populus balsamifera</i> subsp. <i>trichocarpa</i>	black cottonwood	8
<i>Populus tremuloides</i>	quaking aspen	8
<i>Salix scouleriana</i>	Scouler willow	9
<i>Tsuga heterophylla</i>	western hemlock	9
<i>Tsuga mertensiana</i>	mountain hemlock	10
SHRUBS		13
<i>Alnus crispa</i> subsp. <i>sinuata</i>	Sitka alder	13
<i>Alnus incana</i> subsp. <i>tenuifolia</i>	thinleaf alder	13
<i>Amelanchier</i> spp.	serviceberry	14
<i>Andromeda polifolia</i>	bog rosemary	14
<i>Arctostaphylos alpina</i>	alpine bearberry	15
<i>Arctostaphylos rubra</i>	red bearberry	15
<i>Arctostaphylos uva-ursi</i>	kinnikinnick	16
<i>Betula glandulosa/nana</i>	dwarf birches	16
<i>Cassiope mertensiana</i>	Mertens cassiope	17
<i>Cassiope stelleriana</i>	Steller's cassiope	17
<i>Cassiope tetragona</i>	four-angled cassiope	18
<i>Cladothamnus pyrolaeiflorus</i>	copperbush	18
<i>Diapensia lapponica</i>	diapensia	19
<i>Dryas octopetala</i>	white mountain-avens	19
<i>Echinopanax horridum</i>	devil's club	20
<i>Empetrum nigrum</i>	crowberry	20
<i>Juniperus communis</i>	common juniper	21
<i>Ledum palustre</i> subsp. <i>decumbens</i>	narrow-leaf Labrador-tea	21
<i>Ledum palustre</i> subsp. <i>groenlandicum</i>	Greenland Labrador-tea	22
<i>Linnaea borealis</i>	twinflor	22
<i>Loiseleuria procumbens</i>	alpine azalea	23

<i>Luetkea pectinata</i>	luetkea	23
<i>Malus fusca</i>	Oregon crab apple	24
<i>Menziesia ferruginea</i>	rusty menziesia	24
<i>Myrica gale</i>	sweetgale	25
<i>Oxycoccus microcarpus</i>	bog cranberry	25
<i>Phyllodoce aleutica</i>	Aleutian mountain heath	26
<i>Potentilla fruticosa</i>	shrubby cinquefoil	26
<i>Ribes bracteosum</i>	stink currant	27
<i>Ribes glandulosum</i>	skunk currant	27
<i>Ribes hudsonianum</i>	northern black currant	28
<i>Ribes lacustre</i>	bristly black currant	28
<i>Ribes laxiflorum</i>	trailing black currant	29
<i>Ribes triste</i>	northern red currant	29
<i>Rosa acicularis</i>	prickly rose	30
<i>Rubus idaeus</i>	raspberry	30
<i>Rubus spectabilis</i>	salmonberry	31
<i>Salix alaxensis</i>	feltleaf willow	31
<i>Salix arctica</i>	arctic willow	32
<i>Salix barclayi</i>	Barclay willow	32
<i>Salix commutata</i>	undergreen willow	33
<i>Salix depressa</i> subsp. <i>rostrata</i>	Bebb willow	33
<i>Salix hookeriana</i>	Hooker willow	34
<i>Salix myrtillofolia</i>	low blueberry willow	34
<i>Salix pulchra</i>	tealeaf willow	35
<i>Salix reticulata</i>	netleaf willow	35
<i>Salix rotundifolia</i>	least willow	36
<i>Salix sitchensis</i>	Sitka willow	36
<i>Sambucus racemosa</i>	elderberry	37
<i>Shepherdia canadensis</i>	buffaloberry	37
<i>Sibbaldia procumbens</i>	creeping sibbaldia	38
<i>Sorbus scopulina</i>	western mountain-ash	38
<i>Sorbus sitchensis</i>	Sitka mountain-ash	39
<i>Spiraea beauverdiana</i>	Beauverd spiraea	39
<i>Vaccinium alaskensis</i>	Alaska blueberry	40
<i>Vaccinium caespitosum</i>	dwarf blueberry	40
<i>Vaccinium ovalifolium</i>	early blueberry	41
<i>Vaccinium uliginosum</i>	bog blueberry	41
<i>Vaccinium vitis-idaea</i>	lowbush cranberry	42
<i>Viburnum edule</i>	highbush cranberry	42

FORBS

		43
<i>Achillea borealis</i>	yarrow	45
<i>Aconitum delphinifolium</i>	monkshood	45
<i>Actaea rubra</i>	baneberry	46
<i>Anemone narcissiflora</i>	narcissus anemone	46
<i>Anemone richardsonii</i>	yellow anemone	47
<i>Angelica genuflexa</i>	bent-leaved angelica	47
<i>Angelica lucida</i>	seacoast angelica	48
<i>Antennaria monocephala</i>	pygmy pussytoes	48
<i>Apargidium boreale</i>	apargidium	49
<i>Aquilegia formosa</i>	western columbine	49
<i>Arabis lyrata</i>	lyreleaved rockcress	50
<i>Arnica latifolia</i>	broadleaf arnica	50
<i>Artemisia arctica</i>	boreal sagebrush	51
<i>Artemisia tilesii</i>	Aleutian mugwort	51
<i>Aruncus sylvestris</i>	goatsbeard	52
<i>Boschniakia rossica</i>	ground-cone	52
<i>Callitriche hermaphroditica</i>	northern waterstarwort	53
<i>Callitriche verna</i>	spring waterstarwort	53
<i>Caltha palustris</i>	yellow marsh-marigold	54
<i>Campanula lasiocarpa</i>	mountain harebell	54
<i>Campanula rotundifolia</i>	bluebells of Scotland	55
<i>Cardamine umbellata</i>	little western bittercress	55
<i>Castilleja unalaschcensis</i>	Alaska Indian paintbrush	56
<i>Cicuta douglasii</i>	western water hemlock	56
<i>Cicuta mackenziana</i>	Mackenzie's water hemlock	57
<i>Circaea alpina</i>	enchanter's nightshade	57
<i>Coeloglossum viride</i>	longbract frog orchid	58
<i>Conioselinum chinense</i>	western hemlock-parsley	59
<i>Coptis asplenifolia</i>	fern leaf goldenthread	59
<i>Coptis trifolia</i>	trifoliate goldenthread	60
<i>Cornus canadensis</i>	bunchberry	60
<i>Delphinium glaucum</i>	larkspur	61
<i>Dodecatheon pulchellum</i>	pretty shooting star	61
<i>Drosera rotundifolia</i>	round-leaf sundew	61
<i>Epilobium adenocaulon</i>	northern willow herb	62
<i>Epilobium anagalladifolium</i>	alpine willow herb	62
<i>Epilobium angustifolium</i>	tall fireweed	63
<i>Epilobium glandulosum</i>	fringed willow herb	63
<i>Epilobium hornemannii</i>	Hornemann's willow herb	64
<i>Epilobium latifolium</i>	dwarf fireweed	64
<i>Epilobium leptocarpum</i>	slenderfruit willow herb	65

<i>Epilobium palustre</i>	swamp willow herb	65
<i>Erigeron peregrinus</i>	subalpine fleabane	66
<i>Fauria crista-galli</i>	deer cabbage	66
<i>Fragaria chiloensis</i>	beach strawberry	67
<i>Fritillaria camschatcensis</i>	chocolate lily	67
<i>Galium boreale</i>	northern bedstraw	68
<i>Galium trifidum</i>	threepetal bedstraw	68
<i>Galium triflorum</i>	fragrant bedstraw	69
<i>Gentiana douglasiana</i>	swamp gentian	69
<i>Gentiana glauca</i>	pale gentian	70
<i>Gentiana platypetala</i>	spotted gentian	70
<i>Geocaulon lividum</i>	northern comandra	71
<i>Geranium erianthum</i>	northern geranium	71
<i>Geum calthifolium</i>	calthaleaf avens	72
<i>Geum macrophyllum</i>	large-leaf avens	72
<i>Hedysarum alpinum</i>	alpine sweetvetch	73
<i>Heracleum lanatum</i>	cow parsnip	73
<i>Heuchera glabra</i>	alpine heuchera	74
<i>Hieracium triste</i>	woolly hawkweed	74
<i>Hippuris tetraphylla</i>	fourleaf marestail	75
<i>Hippuris vulgaris</i>	common marestail	75
<i>Honckenya peploides</i>	seaside sandplant	76
<i>Iris setosa</i>	wild iris	76
<i>Lathyrus maritimus</i>	beach pea	77
<i>Lathyrus palustris</i>	vetchling	77
<i>Ligusticum scoticum</i>	beach lovage	78
<i>Listera borealis</i>	northern twayblade	78
<i>Listera caurina</i>	western twayblade	79
<i>Listera cordata</i>	heart-leaf twayblade	79
<i>Lloydia serotina</i>	common alplily	80
<i>Lupinus nootkatensis</i>	Nootka lupine	80
<i>Lysichiton americanum</i>	skunk cabbage	81
<i>Lysimachia thyrsiflora</i>	tufted loosestrife	81
<i>Maianthemum dilatatum</i>	deerberry	82
<i>Menyanthes trifoliata</i>	buckbean	82
<i>Mertensia paniculata</i>	chiming bells	83
<i>Minuartia arctica</i>	arctic stitchwort	83
<i>Moehringia lateriflora</i>	grove sandwort	84
<i>Moneses uniflora</i>	single delight	84
<i>Myosotis alpestris</i>	forget-me-not	85
<i>Myriophyllum sibiricum</i>	shortspike watermilfoil	85
<i>Nuphar polysepala</i>	yellow pondlily	86
<i>Osmorhiza depauperata</i>	blunt-fruit sweet-cicely	86

<i>Osmorhiza purpurea</i>	Sitka sweet-cicely	87
<i>Oxytropis nigrescens</i>	blackish oxytrope	87
<i>Parnassia palustris</i>	northern grass-of-parnassas	88
<i>Pedicularis capitata</i>	capitate lousewort	88
<i>Pedicularis kanei</i>	woolly lousewort	89
<i>Pedicularis labradorica</i>	Labrador lousewort	89
<i>Pedicularis langsдорфii</i>	Langsdorf's lousewort	90
<i>Pedicularis parviflora</i>	smallflower lousewort	90
<i>Pedicularis verticillata</i>	whorled lousewort	91
<i>Petasites hyperboreus</i>	arctic sweet coltsfoot	91
<i>Pinguicula vulgaris</i>	common butterwort	92
<i>Plantago maritima</i>	goosetongue plantain	92
<i>Platanthera dilatata</i>	boreal bog orchid	93
<i>Platanthera saccata</i>	slender bog orchid	93
<i>Polemonium acutiflorum</i>	tall Jacob's-ladder	94
<i>Polygonum viviparum</i>	alpine bistort	94
<i>Potamogeton filiformis</i>	slender-leaved pondweed	95
<i>Potamogeton natans</i>	floating pondweed	95
<i>Potamogeton pectinatus</i>	sago pondweed	96
<i>Potamogeton perfoliatus</i>	claspingleaf pondweed	96
<i>Potentilla egedii</i>	Pacific silverweed	97
<i>Potentilla palustris</i>	marsh fivefinger	97
<i>Prenanthes alata</i>	rattlesnake root	98
<i>Primula cuneifolia</i>	wedgeleaf primrose	98
<i>Pyrola asarifolia</i>	liverleaf wintergreen	99
<i>Pyrola chlorantha</i>	greenish wintergreen	99
<i>Pyrola grandiflora</i>	largeflowered wintergreen	100
<i>Pyrola minor</i>	snowline wintergreen	100
<i>Pyrola secunda</i>	one-sided wintergreen	101
<i>Ranunculus cymbalaria</i>	seaside buttercup	101
<i>Ranunculus occidentalis</i>	western buttercup	102
<i>Ranunculus trichophyllus</i>	white water crowfoot	102
<i>Rhinanthus minor</i>	yellow rattle	103
<i>Rubus arcticus</i>	nagoonberry	103
<i>Rubus chamaemorus</i>	cloudberry	104
<i>Rubus pedatus</i>	fiveleaf bramble	104
<i>Rumex fenestratus</i>	western dock	105
<i>Sanguisorba stipulata</i>	Sitka burnet	105
<i>Saxifraga bronchialis</i>	yellowdot saxifrage	106
<i>Saxifraga punctata</i>	heart-leaved saxifrage	106
<i>Saxifraga tricuspidata</i>	prickly saxifrage	107
<i>Sedum rosea</i>	roseroot stonecrop	107
<i>Senecio triangularis</i>	arrowleaf groundsel	108

<i>Solidago multiradiata</i>	northern goldenrod	108
<i>Sparganium angustifolium</i>	floating burreed	109
<i>Sparganium hyperboreum</i>	northern burreed	109
<i>Sparganium minimum</i>	small burreed	110
<i>Spiranthes romanzoffiana</i>	hooded ladies' tresses	110
<i>Stellaria calycantha</i>	northern starwort	111
<i>Stellaria crassifolia</i>	fleshy starwort	111
<i>Stellaria crispa</i>	curled starwort	112
<i>Stellaria sitchana</i>	Sitka starwort	112
<i>Streptopus amplexifolius</i>	twistedstalk	113
<i>Subularia aquatica</i>	awlwort	113
<i>Swertia perennis</i>	star gentian	114
<i>Thalictrum sparsiflorum</i>	fewflower meadowrue	114
<i>Tiarella trifoliata</i>	foamflower	115
<i>Tofieldia coccinea</i>	northern asphodel	115
<i>Tofieldia glutinosa</i>	sticky false-asphodel	116
<i>Trientalis europaea</i>	starflower	116
<i>Triglochin maritimum</i>	seaside arrowgrass	117
<i>Utricularia vulgaris</i>	common bladderwort	117
<i>Valeriana sitchensis</i>	Sitka valerian	118
<i>Veratrum viride</i>	false hellebore	118
<i>Viola epipsila</i>	marsh violet	119
<i>Viola glabella</i>	yellow violet	119
<i>Viola langsдорffii</i>	Alaska violet	120
GRAMINOIDS		121
<i>Agrostis aequivalvis</i>	arctic bentgrass	124
<i>Agrostis alaskana</i>	Alaska bentgrass	124
<i>Arctagrostis latifolia</i>	polargrass	125
<i>Arctophila fulva</i>	pendant grass	125
<i>Calamagrostis canadensis</i>	bluejoint reedgrass	126
<i>Calamagrostis nutkaënsis</i>	Pacific reedgrass	126
<i>Carex anthoxantha</i>	arctic sedge	127
<i>Carex aquatilis</i>	water sedge	127
<i>Carex lyngbyaei</i>	Lyngbye's sedge	128
<i>Carex macrochaeta</i>	longawned sedge	128
<i>Carex magellanica</i>	boreal bog sedge	129
<i>Carex microchaeta</i>	smallawned sedge	129
<i>Carex microglochin</i>	fewseeded bog sedge	130
<i>Carex pauciflora</i>	fewflower sedge	130
<i>Carex pluriflora</i>	manyflower sedge	131
<i>Carex sitchensis</i>	Sitka sedge	131
<i>Deschampsia caespitosa</i>	tufted hairgrass	132

<i>Eleocharis acicularis</i>	needle spikerush	132
<i>Eleocharis palustris</i>	common spikerush	133
<i>Elymus arenarius</i>	beach rye	133
<i>Eriophorum angustifolium</i>	tall cottongrass	134
<i>Eriophorum russeolum</i>	red cottongrass	134
<i>Festuca altaica</i>	rough fescue	135
<i>Festuca rubra</i>	red fescue	135
<i>Glyceria pauciflora</i>	false mannagrass	136
<i>Hierochloë alpina</i>	alpine holygrass	136
<i>Hordeum brachyantherum</i>	meadow barley	137
<i>Juncus alpinus</i>	alpine rush	137
<i>Juncus arcticus</i>	arctic rush	138
<i>Luzula multiflora</i>	common woodrush	138
<i>Luzula parviflora</i>	smallflowered woodrush	139
<i>Luzula wahlenbergii</i>	Wahlenberg's woodrush	139
<i>Phleum commutatum</i>	mountain timothy	140
<i>Poa lanata</i>	arctic bluegrass	140
<i>Poa macrantha</i>	seashore bluegrass	141
<i>Puccinellia nutkaensis</i>	Nootka alkaligrass	141
<i>Puccinellia pumila</i>	dwarf alkaligrass	142
<i>Trichophorum caespitosum</i>	tufted bulrush	142
<i>Trisetum spicatum</i>	spike trisetum	143
<i>Vahlodea atropurpurea</i>	mountain hairgrass	143

FERNS AND FERN ALLIES 145

<i>Athyrium filix-femina</i>	lady fern	146
<i>Blechnum spicant</i>	deer fern	146
<i>Cystopteris fragilis</i>	fragile fern	147
<i>Dryopteris dilatata</i>	wood fern	147
<i>Equisetum arvense</i>	common horsetail	148
<i>Equisetum fluviatile</i>	swamp horsetail	148
<i>Equisetum palustre</i>	marsh horsetail	149
<i>Equisetum pratense</i>	meadow horsetail	149
<i>Equisetum sylvaticum</i>	woodland horsetail	150
<i>Equisetum variegatum</i>	northern horsetail	150
<i>Gymnocarpium dryopteris</i>	oak fern	151
<i>Lycopodium alpinum</i>	alpine clubmoss	151
<i>Lycopodium annotinum</i>	stiff clubmoss	152
<i>Lycopodium clavatum</i>	running clubmoss	152
<i>Lycopodium complanatum</i>	groundcedar	153
<i>Lycopodium sabinifolium</i>	savinleaf groundpine	153
<i>Lycopodium selago</i>	fir clubmoss	154
<i>Selaginella selaginoides</i>	club spikemoss	154

<i>Thelypteris limbosperma</i>	maiden fern	155
<i>Thelypteris phegopteris</i>	beechn fern	155

APPENDICES		157
Appendix 1. Comparison between Hultén and PLANTS nomenclature		159
Appendix 2. Comparison among white, Lutz, and Sitka spruce		161
Appendix 3. Comparison between western and mountain hemlock		162
Appendix 4. Comparison among stink, trailing black, northern black, and northern red currant		163
Appendix 5. Comparison between Alaska and early blueberry		164
Appendix 6. Glossary		165
Appendix 7. Common name index		170
Appendix 8 Suggested Reading		178

INTRODUCTION

This book is primarily a visual and descriptive guide to vascular plant species commonly found on the Chugach National Forest. This book is intended for all users, not just botanists, and as such, technical terminology has been avoided whenever possible. For more comprehensive descriptions and keys to the plants we suggest *Flora of Alaska and Neighboring Territories: A Manual of the Vascular Plants* (Hultén, 1968).

An earlier version of this guide was entitled *Forest Plant Identification Guide: Chugach National Forest* (Borchers and Wertheim 1992) and featured 194 taxa. We have revised the earlier guide by expanding the scope to include plants predominately found in non-forest settings and other forest species found to be common on the National Forest. A total of 284 taxa are included.

Included are woody species occurring on five or more of 2300 sample sites; forbs, ferns, and fern allies occurring on 10 or more of the sites; and graminoids (grass and grass-like plants) occurring on 20 or more of the sites. Also included are less common species if they are used in the names or descriptions of community types in DeVelice et al. (1999).

This guide is organized by life forms: trees; shrubs; forbs; graminoids; and ferns and fern allies. Names are organized alphabetically by genus and species within each life form. Descriptions are presented in the following format:

GENUS AND SPECIES	SPECIES CODE
COMMON NAME	FAMILY
HABIT: Size range and general appearance of the species.	
KEY CHARACTERS: Description of the species.	
HABITAT: Description of the most frequently occupied habitat.	

Scientific nomenclature follows Hultén (1968). Common names are from various sources. Species codes are as provided in the PLANTS database (USDA, NRCS 1999). For 58 species, the PLANTS database provides revised scientific nomenclature from that in Hultén. A crosswalk table listing these revisions (based on a February 5, 2001 download from the PLANTS database) is in the Appendices.

Also included are summary tables, located in the Appendices, of major characteristics of genera that contain a number of species that are often confused. A Glossary is located in the Appendices that will help the user become acquainted with terms.

TREES

Betula kenaica
Kenai birch

BEKE2
Betulaceae

HABIT: Deciduous, 20–80 feet.

KEY CHARACTERS: Leaves alternate, doubly toothed, short-pointed with hairs above. Twigs with reddish hairs and resin dots when young. Inflorescence a short, narrow, dark brown catkin. Fruit cone-like, 1 inch long, upright or spreading. Bark dark brown and papery.



HABITAT: Subalpine, in alder belt.

Betula papyrifera
paper birch

BEPA
Betulaceae

HABIT: Deciduous, 20–80 feet.

KEY CHARACTERS: Leaves alternate, toothed, long-pointed, hairless above. Twigs with many resin dots. Inflorescence a short, thick, greenish-brown catkin. Fruit cone-like, hairless, 1–1½ inches long, hanging down or spreading. Bark white and papery.



HABITAT: Low elevation to treeline. Prefers warm slopes with moist porous soils, also common on cold north slopes and poorly drained lowlands. Common pioneer after burns. In pure stands or with white or black spruce.

Chamaecyparis nootkatensis CHNO
Alaska yellow cedar Cupressaceae

HABIT: Evergreen, 40–80 feet.

KEY CHARACTERS: Leaves yellow-green, scale-like, pointed, and spreading. Leafy twigs four-angled. Branches droop. Cones small, round, with 4–6 scales. Wood with “potato-like” odor.

HABITAT: Scattered in small groups in coastal forest from sea level to treeline but best developed below 1200 feet. In pure stands or with birch.



Picea glauca PIGL
white spruce Pinaceae

HABIT: Evergreen, 35–85 feet.

KEY CHARACTERS: Needles $\frac{1}{2}$ – $\frac{3}{4}$ inches long, four-angled, pointed, with white lines on all sides. Twigs hairless, with needles massing on top near the ends. Needles and twigs with skunk-like odor. Cones $1\frac{1}{4}$ – $2\frac{1}{2}$ inches long, deciduous, cylindrical, nearly stalkless, with thin, round, smooth, flexible scales. Inner bark white.

HABITAT: Sea level to treeline. Prefers river bottoms, sandy lakeshores, and well-drained gentle south slopes.



Picea X lutzii
Lutz spruce

PILU
Pinaceae

A natural hybrid between white spruce and Sitka spruce, with most characteristics intermediate between the two species.

HABIT: Evergreen, 55–100 feet.

KEY CHARACTERS: Needles slightly four-angled with white upper surface. Cones scales short and toothed.

Picea mariana
black spruce

PIMA
Pinaceae

HABIT: Evergreen, 15–30 feet.

KEY CHARACTERS: Needles short, squarish in cross-section, with white lines on all sides. Twigs red hairy. Cones 1 inch long, rounded, dark, remaining on tree several years. Inner bark yellow.

HABITAT: Muskegs, wet meadows, lakeshores.



Picea sitchensis
Sitka spruce

PISI
Pinaceae

HABIT: Evergreen, 80–150 feet.

KEY CHARACTERS: Needles $\frac{3}{4}$ –1 inch long, flattened, keeled underneath, sharp pointed, white above. Twigs hairless. Cones 2–3½ inches long, cylindric-oblong, with long, thin, stiff, rounded, and toothed scales. Inner bark white with brown dots.

HABITAT: Chiefly below 1500 feet, but up to 3000 feet. In pure stands or with hemlock or cottonwood.



Populus balsamifera
subsp. *balsamifera*
balsam poplar

POBAB2
Salicaceae

HABIT: Deciduous, 30–45 feet.

KEY CHARACTERS: Leaves alternate, pale and rusty brown underneath, with small rounded teeth. Winter buds 1 inch long, sticky, pointed, odorous. Inflorescence a 2–3½ inch long, drooping catkin. Fruit hairless 2-parted capsules on 6 inch long catkins. Bark thick, grey, deeply furrowed.

HABITAT: River valleys, lakeshores, alluvial flats.



Populus balsamifera
subsp. *trichocarpa*
black cottonwood

POBAT
Salicaceae

HABIT: Deciduous, 80–100 feet.

KEY CHARACTERS: Leaves alternate, pale and rusty brown underneath, with small rounded teeth. Winter buds $\frac{3}{4}$ inches long, sticky, pointed. Inflorescence a $1\frac{1}{2}$ –3 inch long drooping catkin. Fruit 3-parted capsules with white hairs, on 6 inch long catkins. Bark thick, grey, deeply furrowed.

HABITAT: Open forests, river bottoms.



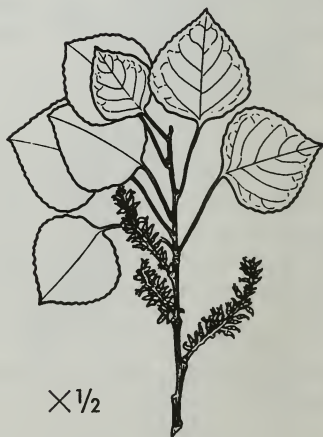
Populus tremuloides
quaking aspen

POTR5
Salicaceae

HABIT: Deciduous, 20–40 feet.

KEY CHARACTERS: Leaves with flat petiole and small rounded teeth. Inflorescence 1– $2\frac{1}{2}$ inch long drooping catkin. Fruit 2-parted capsules on 4 inch long catkins. Bark smooth, pale, yellowish-green.

HABITAT: Open forests, streambanks, south slopes. Common pioneer after burns.



Salix scouleriana
Scouler willow

SASC
Salicaceae

HABIT: Deciduous, 30–60 feet.

KEY CHARACTERS: Leaves alternate, red pubescent underneath, crowded at ends of twigs. Buds red, without bud scales. Fruit woolly capsules on 2 inch long, stalkless catkins. Bark grey and smooth.

HABITAT: Forests, muskegs, burned areas.



Tsuga heterophylla
western hemlock

TSHE
Pinaceae

HABIT: Evergreen, 100–120 feet.

KEY CHARACTERS: Needles in 2 rows on twigs, flattened, white underneath. Leading branch at top of tree droops. Cones $\frac{3}{4}$ –1 inch long. Inner bark red. Bark red-dish-brown.

HABITAT: Sea level to subalpine, below mountain hemlock zone. Prefers moist flats and low slopes. In stands with Sitka spruce and mountain hemlock.



Tsuga mertensiana
mountain hemlock

TSME
Pinaceae

HABIT: Evergreen, 50–100 feet.
Sometimes 10 feet tall or less in musogs
and at upper treeline.

KEY CHARACTERS: Needles on all sides
of twigs, keeled, curved, white on both
sides. Leading branch at top of tree droops.
Cones 1–3 inches long. Bark gray to dark-
brown.

HABITAT: Sea level to 3500 feet, extend-
ing higher than western hemlock. Muskegs
and mountain slopes.



× 1/3

SHRUBS

Alnus crispa
subsp. *sinuata*
Sitka alder

ALCRS
Betulaceae

HABIT: Deciduous, ascending, many-stemmed shrub, 5–25 feet.

KEY CHARACTERS: Leaves alternate, doubly toothed, shiny, sticky when young, with pointy lobes. Stems usually curved. Inflorescence a 3–5 inch catkin. Fruit cone-like on stalks longer than $\frac{1}{4}$ inch.

HABITAT: Sea level to alpine.
Streambanks, disturbed areas, shorelines, slopes, avalanche shoots.



Alnus incana
subsp. *tenuifolia*
thinleaf alder

ALINT
Betulaceae

HABIT: Deciduous large shrub or small tree, 15–30 feet.

KEY CHARACTERS: Leaves alternate, doubly toothed, with rounded lobes, often with reddish color. Inflorescence a narrow, $1\frac{1}{2}$ –3 inch long catkin. Fruit cone-like on stalks shorter than $\frac{1}{4}$ inch.

HABITAT: Open forests, streambanks.



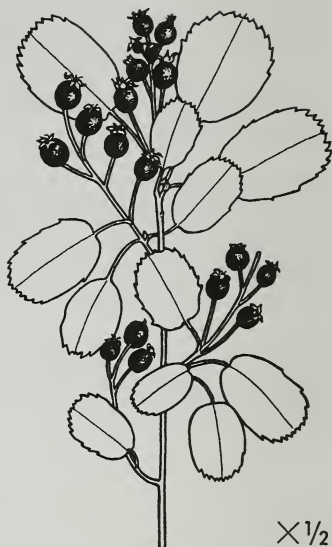
Amelanchier spp.
serviceberry

AMELA
Rosaceae

HABIT: Deciduous low shrub to small tree,
1–15 feet.

KEY CHARACTERS: Leaves alternate,
nearly round, with teeth toward tip. Flowers
white, fragrant. Fruits apple-like, round,
purplish-black, less than $\frac{3}{4}$ inch in diameter.

HABITAT: Open forests, meadows.



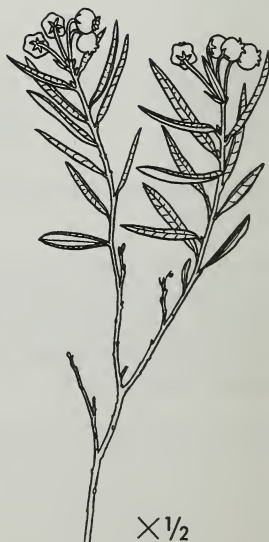
Andromeda polifolia
bog rosemary

ANPO
Ericaceae

HABIT: Evergreen, creeping shrub with
ascending branches, Up to 1 foot (usually
shorter).

KEY CHARACTERS: Leaves alternate,
whitish underneath, edges rolled under,
thick, with sunken veins above. Flowers
pink, in terminal inflorescences, nodding.
Fruit $\frac{1}{4}$ inch diameter, round, 5-parted cap-
sules.

HABITAT: Muskegs.



Arctostaphylos alpina
alpine bearberry

ARAL2
Ericaceae

HABIT: Deciduous prostrate shrub, 2–4 inches.

KEY CHARACTERS: Leaves alternate, whitish underneath, toothed, thick, distinctly veined, with hairy edges. Flowers white, few, terminal, nodding. Fruit round, black berries.

HABITAT: Alpine tundra.



Arctostaphylos rubra
red bearberry

ARRU
Ericaceae

HABIT: Deciduous prostrate shrub, to 6 inches.

KEY CHARACTERS: Leaves alternate, whitish underneath, toothed, thin, distinctly veined, without hairy edges. Flowers white, few, terminal, nodding. Fruit round, red berries.

HABITAT: Spruce forests, muskegs.



Arctostaphylos uva-ursi
kinnikinnick

ARUV
Ericaceae

HABIT: Evergreen prostrate shrub, 3–4 inches.

KEY CHARACTERS: Leaves alternate, spatula-shaped, leathery, distinctly veined. Flowers white to pink, in few-flowered terminal inflorescences. Fruit dry, red berries.

HABITAT: Open spruce forests, dry sandy places with aspen.



$\times \frac{1}{2}$

Betula glandulosa/nana
dwarf birches

BETUL
Betulaceae

Betula glandulosa and *B. nana* hybridize extensively with each other, making identification difficult. The dwarf birches also hybridize with the tree birches.

HABIT: Deciduous low spreading to upright shrub, 1–5 feet.

KEY CHARACTERS: Leaves alternate, less than 1 inch long, thick, hairless, with rounded teeth. Twigs covered with resin dots. Inflorescence a catkin. Fruits cone-like.

HABITAT: Muskegs, swamps, wet areas, rocky alpine slopes, tundra.



$\times \frac{1}{2}$

Cassiope mertensiana
Mertens cassiope

CAME7
Ericaceae

HABIT: Evergreen mat-forming shrub,
2–12 inches.

KEY CHARACTERS: Leaves opposite, in
4 rows, $\frac{1}{8}$ inch long, scale-like, completely
covering stem. Flowers white to pink, sev-
eral per stem, solitary, from leaf bases.
Fruit $\frac{1}{8}$ inch diameter, round, upright cap-
sules.

HABITAT: To 3900 feet. Mountain mead-
ows, slopes adjacent to snowfields.



Cassiope stelleriana
Steller's cassiope

CAST33
Ericaceae

HABIT: Evergreen, mat-forming shrub,
2–4 inches.

KEY CHARACTERS: Leaves alternate,
spreading, $\frac{1}{8}$ inch long, needle-like. Flowers
white to pinkish, 1 per stem, terminal. Fruit
 $\frac{1}{8}$ inch diameter, round, upright capsules.

HABITAT: To 6000 feet. Forests near tree-
line, heaths, snow depressions, protected
slopes.



Cassiope tetragona
four-angled cassiope

CATE11
Ericaceae

HABIT: Dwarf shrub.

KEY CHARACTERS: Coarse, dark green, leaves in 4 rows, lance-shaped, deeply grooved and slightly hairy. Bell-shaped corolla.

HABITAT: Dry heaths and rocks on tundra or in the mountains, to at least 6500 feet. Common in the North.



Cladothamnus pyrolaeiflorus CLPY3
copperbush Ericaceae

HABIT: Deciduous upright shrub, 1½–4½ feet.

KEY CHARACTERS: Leaves whorled, in clusters, light green above, white underneath, with pointed tip and nearly no petiole. Flowers copper colored, few, terminal, with long, curved style. Fruit ⅛–¼ inch diameter round capsules.

HABITAT: At and above treeline, and cold sites at lower elevations. Open forests, meadows, streambanks, openings. Generally with Mountain hemlock.



Diapensia lapponica
diapensia

DILA
Diapensiaceae

HABIT: Evergreen prostrate shrub, 1–3 inches.

KEY CHARACTERS: Leaves alternate, thick, fleshy, crowded and overlapping, with one vein. Flowers white, $\frac{3}{4}$ inch across, solitary, upright. Fruit $\frac{1}{2}$ inch diameter, egg-shaped, upright capsules.

HABITAT: Rocky alpine areas.



Dryas octopetala
white mountain-avens

DROC
Rosaceae

HABIT: Evergreen, decumbent or mat-forming shrub, 1–5 inches.

KEY CHARACTERS: Leaves alternate, shiny green above, white woolly and with scales and hairs on midvein underneath, edges rolled under, with rounded teeth and sunken veins. Flowers white, solitary, on long, leafless stalks, stalks woolly, sepals with long, dark glands. Fruit nutlets with long plumes.

HABITAT: Forests, heaths, tundra.



Echinopanax horridum
devil's club

ECHO2
Araliaceae

HABIT: Deciduous, with few long, prickly, decumbent branches, 2–10 feet.

KEY CHARACTERS: Leaves alternate, 1–2 feet long, 5–7 lobed, spiny. Branches with stout prickles. Flowers in terminal spike. Fruit red berries.

HABITAT: Moist forests, under alder, on good Sitka spruce sites, in subalpine with mountain hemlock.



Empetrum nigrum
crowberry

EMNI
Empetraceae

HABIT: Evergreen, mat-forming shrub, 3–6 inches.

KEY CHARACTERS: Leaves 4 in a whorl or alternate, needle-like, with white groove underneath. Flowers inconspicuous. Fruits berry-like, black.

HABITAT: Sea level to alpine. Forests, muskegs, rocky alpine slopes.



Juniperus communis
common juniper

JUCO6
Cupressaceae

HABIT: Evergreen spreading shrub, 1–2 feet.

KEY CHARACTERS: Needles in whorls of 3, spreading at right angle from twig, with white band above. Cones berry-like, green ripening to black.

HABITAT: Dry slopes.



Ledum palustre
subsp. *decumbens*
narrow-leaf Labrador-tea

LEPAD
Ericaceae

HABIT: Evergreen low shrub, 1–2 feet.

KEY CHARACTERS: Leaves alternate, shorter than 1 inch, less than 1/8 inch wide, with edges rolled under and reddish-brown woolly hairs underneath. Flowers white, 1/2 inch across, in terminal clusters, with 10 stamens. Flower stalks with short white hairs. Fruit 1/8–1/4 inch long, oval capsules.

HABITAT: To 5400 feet. Black spruce forests, heaths, muskegs.



Ledum palustre

subsp. *groenlandicum*

Greenland Labrador-tea

LEPAG

Ericaceae

HABIT: Evergreen low shrub, to 3 feet.

KEY CHARACTERS: Leaves alternate, 1–2 inches long, greater than $\frac{1}{8}$ inch wide, fragrant, with edges rolled under and reddish-brown woolly hairs underneath.

Flowers white, $\frac{5}{8}$ inch across, in terminal clusters, fragrant, with 8 stamens. Flower stalks with reddish hairs. Fruit $\frac{1}{4}$ inch long capsules.

HABITAT: Black spruce forests, birch forests, with white spruce near treeline, muskegs.



Linnaea borealis
twinflower

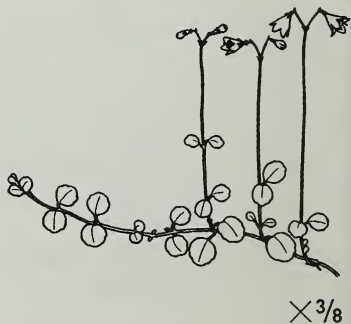
LIBO3

Caprifoliaceae

HABIT: Evergreen, creeping, 1–4 inches.

KEY CHARACTERS: Leaves opposite, roundish, leathery, with 1–3 teeth on each side. Flowers white to rose, fragrant, nodding, in terminal pairs on upright stems. Fruits hairy.

HABITAT: Forests, heaths.



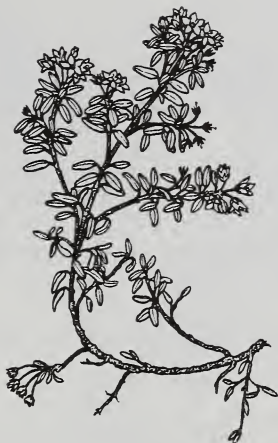
Loiseleuria procumbens
alpine azalea

LOPR
Ericaceae

HABIT: Evergreen mat forming much branched shrub, 1–2 inches.

KEY CHARACTERS: Leaves opposite, white underneath, edges rolled under, leathery. Flowers pink, $\frac{1}{8}$ inch across, terminal, upright. Fruit $\frac{1}{8}$ inch diameter, round, upright, 2–3 parted capsules.

HABITAT: Well-drained acidic alpine tundra.



$\times \frac{2}{3}$

Luetkea pectinata
luetkea

LUPE
Rosaceae

HABIT: Creeping shrub with upright leafy stems, 2–6 inches.

KEY CHARACTERS: Leaves crowded at base of stems, alternate along stem, fan-shaped, with many narrow divisions. Flowers white, in terminal cluster. Fruit pod-like.

HABITAT: Forests near treeline, alpine and subalpine meadows near snow.



$\times \frac{3}{4}$

Malus fusca
Oregon crab apple

MAFU
Rosaceae

HABIT: Deciduous large shrub or small tree with several thorny stems, to 25 feet.

KEY CHARACTERS: Leaves alternate, toothed, pale and hairy underneath, often with 3 lobes. White or pink, few-flowered inflorescences. Fruits apple-like, yellow or red.

HABITAT: Moist forests, meadows, stream-banks, beach forests.



Menziesia ferruginea
rusty menziesia

MEFE
Ericaceae

HABIT: Deciduous spreading to upright shrub. 3–10 feet.

KEY CHARACTERS: Leaves alternate, gray-green with brown hairs above, white with sticky hairs underneath. Twigs with odor when crushed. Flowers yellowish-red, several, terminal. Fruit ¼ inch long 4-parted capsules, persistent through winter.

HABITAT: Moist forests, openings, under spruce-hemlock and spruce-birch.



Myrica gale
sweetgale

MYGA
Myricaceae

HABIT: Deciduous low shrub, 1–4 feet.

KEY CHARACTERS: Leaves alternate, toothed toward tip, with yellow waxy glands and gray-green pubescence. Twigs with yellow resin dots. Flowers yellowish, inconspicuous, blooming before leaves appear. Fruit small, waxy, 2-winged, green nutlets.

HABITAT: Coastal meadows, muskegs, swamps, shallow water, tidal flats.



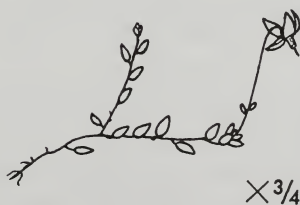
Oxycoccus microcarpus
bog cranberry

OXMI3
Ericaceae

HABIT: Evergreen creeping vine-like shrub, 1–3 inches.

KEY CHARACTERS: Leaves alternate, $\frac{1}{8}$ – $\frac{3}{8}$ inch long, dark green above, white underneath, with edges rolled under. Twigs very slender. Flowers pink, solitary, on long, leafless stalks, nodding, with petals bent backward. Fruit red berries.

HABITAT: Muskegs, alpine meadows.



Phyllodoce aleutica PHAL4
Aleutian mountain heath Ericaceae

HABIT: Evergreen mat-forming shrub, 2–6 inches.

KEY CHARACTERS: Leaves crowded on upper 2–4 inches of stem, needle-like, toothed, with a pale groove and hairs underneath. Twigs with peg-like leaf scars. Flowers yellowish, several, terminal, may have glandular hairs. Fruit $\frac{3}{8}$ inch long, oval, 5-parted capsules.

HABITAT: Sea level to alpine. Moraines and outwash at sea level, heaths, protected slopes adjacent to snow fields.



Potentilla fruticosa POFR4
shrubby cinquefoil Rosaceae

HABIT: Deciduous spreading to upright much-branched shrub, 1–4 feet.

KEY CHARACTERS: Leaves alternate, with 3–7 leaflets, green above, grayish and silvery hairy underneath. Flowers yellow, $\frac{3}{4}$ –1 $\frac{1}{4}$ inches across, upright, solitary, from leaf bases or in terminal clusters. Fruit white-haired achenes.

HABITAT: To 4500 feet. Forests, muskegs, wet soil, rocky slopes.



Ribes bracteosum
stink currant

RIBR
Saxifragaceae

HABIT: Deciduous ascending or upright shrub, 3–6 feet.

KEY CHARACTERS: Leaves alternate, 5–7 lobed, singly or doubly toothed. Skunky odor to plant. Flowers white, greenish, or purplish, with hairy and glandular ovary. Racemes upright, 3–12 inches long. Fruit glandular, disagreeable-tasting, black berries.

HABITAT: Forests, streambanks, with alder in spruce–hemlock forests.



Ribes glandulosum
skunk currant

RIGL
Saxifragaceae

HABIT: Deciduous, ascending shrub.

KEY CHARACTERS: Smooth, deeply heart-shaped leaves, 5–7 lobed, sharp-pointed, doubly serrate. Whitish or pink flowers. Red fruit, with the odor of skunk.

HABITAT: Woods, rocky slopes in the lowlands.



Ribes hudsonianum
northern black currant

RIHU
Saxifragaceae

HABIT: Deciduous upright shrub, 3–6 feet.

KEY CHARACTERS: Leaves alternate, 3–5 lobed, toothed. Flowers white with yellow-dotted ovary. Racemes ascending or spreading, 1–2½ inches long. Fruit smooth or glandular, bitter but edible black berries, with bloom.

HABITAT: Moist forests, streambanks, at treeline with alder, with spruce, birch, and aspen.



Ribes lacustre
bristly black currant

RILA
Saxifragaceae

HABIT: Deciduous spreading to upright spiny shrub, 2–4 feet.

KEY CHARACTERS: Leaves alternate, with 3–5 lobes, the lobes again lobed or toothed. Twigs spiny. Flowers pink, spreading or drooping racemes. Fruit palatable dark purple berries with gland-tipped hairs.

HABITAT: Moist forests, streambanks, with white spruce and Sitka spruce.



Ribes laxiflorum
trailing black currant

RILA3
Saxifragaceae

HABIT: Deciduous decumbent to upright shrub, sometimes vine-like, to 2 feet.

KEY CHARACTERS: Leaves alternate, blades $2\frac{1}{2}$ –3 inches-long, doubly toothed, with 5 lobes. Flowers red to purplish, ovary with hairs and stalked glands, sepals hairy on back. Racemes ascending or upright, 4–6 inches long, with 6–20 flowers. Fruit foul smelling, edible, purplish-black berries, with bloom and stalked glands.

HABITAT: Moist forests, open meadows, wet areas, spruce–hemlock forests.



$\times \frac{1}{4}$

Ribes triste
northern red currant

RITR
Saxifragaceae

HABIT: Deciduous prostrate to erect shrub, 2–3 feet.

KEY CHARACTERS: Leaves alternate, with 3–5 lobes, toothed. Flowers purple, with smooth ovary. Racemes 2–4 inches long. Fruit ovoid, smooth, palatable, bright red, translucent berries.

HABITAT: Lowlands to treeline. Spruce forests, streambanks, wet meadows.



$\times \frac{1}{3}$

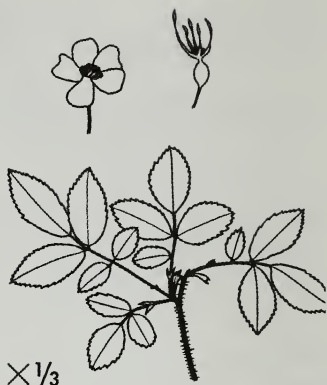
Rosa acicularis
prickly rose

ROAC
Rosaceae

HABIT: Deciduous much-branched spiny shrub, 1–4 feet.

KEY CHARACTERS: Leaves alternate, toothed, with 3–7 leaflets. Twigs and branches with prickles and spines. Flowers rose to pink, 1½–2¼ inches across, usually solitary, terminal. Fruit dark red to purplish hips.

HABITAT: Open forests, meadows, thickets, muskegs, with aspen on burns.



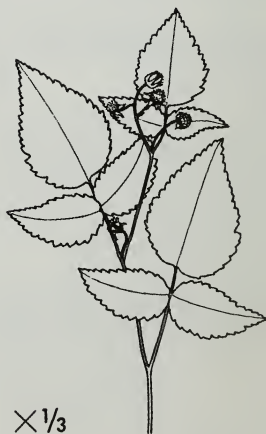
Rubus idaeus
raspberry

RUID
Rosaceae

HABIT: Deciduous upright prickly biennial shrub, 2–4 feet.

KEY CHARACTERS: Leaves alternate, whitish underneath, toothed, with 3–5 leaflets. Twigs and branches with prickles. Flowers white, ½ inch across, 1–4 in raceme, with sepals bent backward. Fruit red, ¾ inch long.

HABITAT: Forests, thickets.



Rubus spectabilis
salmonberry

RUSP
Rosaceae

HABIT: Deciduous upright somewhat prickly biennial shrub, 2–7 feet.

KEY CHARACTERS: Leaves alternate, usually with 3 leaflets, the leaflets toothed to nearly lobed. Flowers pink, 1½ inches across, solitary or 2. Fruit red or yellow, 1 inch long.

HABITAT: To lower alpine. Moist forests, streambanks, avalanche chutes, sideslopes, and ravines.



Salix alaxensis
feltleaf willow

SAAL
Salicaceae

HABIT: Shrub or small tree, up to 20–25 feet.

KEY CHARACTERS: Young twigs woolly. Leaves tear-shaped with dense white felt beneath. Stout, erect catkins.

HABITAT: Common along creeks and rivers, to at least 6000 feet.



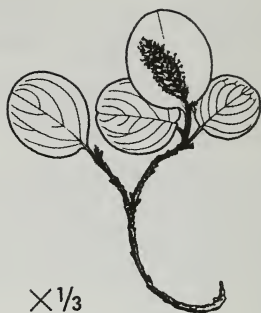
Salix arctica
arctic willow

SAAR4
Salicaceae

HABIT: Dwarf shrub.

KEY CHARACTERS: Thick, smooth branches. Leaves ovate, entire, dark green above, paler beneath, slightly hairy when young but later smooth. Catkins about 1 inch long.

HABITAT: Dry tundra, mostly in mountains.



Salix barclayi
Barclay willow

SABA3
Salicaceae

HABIT: Deciduous shrub, 6–9 feet.

KEY CHARACTERS: Leaves alternate, white underneath, often toothed, turning black when dry. Buds without bud scales. Inflorescence a catkin. Fruit hairless capsules.

HABITAT: Forest openings, streambanks, wet areas, alpine and subalpine slopes.



Salix commutata
undergreen willow

SACO2
Salicaceae

HABIT: Shrub up to 6 feet.

KEY CHARACTERS: Dense gray hair on young twigs. Leaves elliptical, pointed at tips, with dense gray hair on both sides when young, becoming smooth with age.

HABITAT: Alpine meadows and wet areas.



Salix depressa
subsp. *rostrata*
Bebb willow

SADER
Salicaceae

HABIT: Deciduous large shrub or small tree, to 30 feet.

KEY CHARACTERS: Leaves alternate, 1-3½ inches long, dull gray above and gray or whitish underneath, pointed at base, nearly toothless, with hairs on both sides. Twigs leave branches nearly at right angles. Buds with no bud scales. Inflorescences 1-3 inch long catkins with short, leafy stalks appearing before or with the leaves. Fruit hairy capsules on ¼- ⅜ inch long stalks.

HABITAT: To subalpine. Dry areas in forests.



Salix hookeriana
Hooker willow

SAHO
Salicaceae

Not in Hultén (1968). See Welch (1974).

HABIT: Deciduous shrub, 2–15 feet.

KEY CHARACTERS: Leaves alternate, hairy on both surfaces, branches very brittle. Inflorescence a catkin.

HABITAT: Stabilized sand dunes, wet meadows near the coast, beach ridges.

Salix myrtillofolia
low blueberry willow

SAMY
Salicaceae

HABIT: Deciduous low shrub, to 3 feet.

KEY CHARACTERS: Leaves alternate, green on both surfaces, often drying brownish.

HABITAT: Muskegs, fens, wet lake margins and river banks.



Salix pulchra
tealeaf willow

SAPU15
Salicaceae

HABIT: Deciduous shrub, to 6 feet.

KEY CHARACTERS: Leaves alternate, green above, whitish below. Previous years leaves often persisting as brown, withered remains.

HABITAT: Alpine tundra, coniferous woodlands, shrub thickets along streams and lakes.



Salix reticulata
netleaf willow

SARE2
Salicaceae

HABIT: Deciduous prostrate shrub, 2–3 inches.

KEY CHARACTERS: Leaves alternate, dark green, leathery, distinctly net-veined, with edges rolled under. Inflorescence an upright catkin, to 2 inches long. Fruit capsules with white hairs.

HABITAT: Dry and moist tundra.



Salix rotundifolia
least willow

SARO2
Salicaceae

HABIT: Dwarf shrub, forming mats.

KEY CHARACTERS: Very thin, slightly hairy annual shoots. Small, leathery, round or ovate leaves, entire with lateral veins raised on both sides. Very short catkins, few-flowered.

HABITAT: Arctic and alpine lichen tundra, rocky places, to at least 6500 feet.



Salix sitchensis
Sitka willow

SASI2
Salicaceae

HABIT: Shrub, up to 30 feet with trunk 12 inches in diameter.

KEY CHARACTERS: Twigs hairy when young, more or less smooth with age. Leaves oblong or tear-shaped, with silky hairs. Long, slender catkins, densely flowered.

HABITAT: Along streams and shores and wet areas.



Sambucus racemosa
elderberry

SARA2
Caprifoliaceae

HABIT: Deciduous clump-forming shrub,
6–12 feet.

KEY CHARACTERS: Leaves opposite,
5–10 inches long, toothed, hairy under-
neath, with 5–7 leaflets. Unpleasant odor to
crushed leaves or twigs. Flowers small,
white, in a terminal pyramidal inflores-
cences. Fruit small red drupes. Bark brown
and warty.



HABITAT: Forests, thickets with alder or
willow, streambanks, subalpine meadows.

Shepherdia canadensis
buffaloberry

SHCA
Elaeagnaceae

HABIT: Deciduous shrub, to 6 feet.

KEY CHARACTERS: Leaves opposite,
green above, with reddish scales under-
neath. Twigs with brownish scales. Flowers
small, yellowish or brownish. Fruit berry-
like, yellow or red, 1/4 inch long.

HABITAT: To 3600 feet. Well-drained
forests, gravel bars, with aspen on burns.



Sibbaldia procumbens
creeping sibbaldia

SIPR
Rosaceae

HABIT: Mat forming, 2–6 inches.

KEY CHARACTERS: Leaves with 3 leaflets, 3-toothed at apex, hairy on both surfaces. Flowers inconspicuous with pale yellow petals.

HABITAT: Alpine tundra, open woods in the subalpine zone.



Sorbus scopulina
western mountain-ash

SOSC2
Rosaceae

HABIT: Deciduous many-stemmed shrub, 3–13 feet, or small tree to 20 feet.

KEY CHARACTERS: Leaves alternate, singly or doubly toothed, pointy at tip, with 11–13 leaflets. Buds sticky. Buds and twigs with white hairs. Flowers white, in terminal, rounded inflorescences. Fruit apple-like, orange to red, less than $\frac{3}{8}$ inch in diameter.

HABITAT: Forests, subalpine.



Sorbus sitchensis
Sitka mountain-ash

SOSI2
Rosaceae

HABIT: Deciduous shrub, 4–8 feet, or small tree, to 20 feet.

KEY CHARACTERS: Leaves alternate, toothed, rounded at tip, with 7–11 leaflets. Buds and twigs with brown hairs. Twigs with odor and bitter taste of cherry. Flowers white, fragrant, in terminal rounded inflorescences. Fruits apple-like, red with bluish bloom, ½ inch in diameter.

HABITAT: Sea level to timberline.



Spiraea beauverdiana
Beauverd spiraea

SPBE
Rosaceae

HABIT: Deciduous low to midsize many-branched shrub, 1–2 feet.

KEY CHARACTERS: Leaves alternate, toothed especially toward tip. Young branches reddish-brown. Flowers white or pink in a flat-topped or hemispheric inflorescence. Fruit pod-like, persistent through winter.

HABITAT: Low elevation to alpine. Forests, meadows, black spruce muskegs, tundra.



Vaccinium alaskensis
Alaska blueberry

VAAL
Ericaceae

HABIT: Deciduous spreading to upright shrub, up to 6 feet.

KEY CHARACTERS: Leaves alternate, with small teeth in lower half or no teeth, glands on midvein underneath. Flowers pink, solitary, from leaf bases, appearing with leaves or after leaves partially developed. Fruit blue-black berries, usually without bloom. Fruit stalk straight, enlarged below fruit, often longer than $\frac{3}{8}$ inch.

HABITAT: Spruce-hemlock forests on the coast, especially in openings.



Vaccinium caespitosum
dwarf blueberry

VACA13
Ericaceae

HABIT: Deciduous spreading much-branched shrub, 4–16 inches.

KEY CHARACTERS: Leaves alternate, toothed. Flowers pink to white, solitary, from leaf bases. Fruit blue to black berries.

HABITAT: Open forests, muskegs.



Vaccinium ovalifolium
early blueberry

VAOV
Ericaceae

HABIT: Deciduous spreading shrub, to 5 feet.

KEY CHARACTERS: Leaves alternate, usually with no teeth or glands. Largest leaves at end of twigs. Flowers pink, solitary, from leaf bases, longer than broad, appearing before or with leaves. Fruit bluish or blue-black berries, with whitish bloom. Fruit stalk curved, not enlarged below fruit, usually shorter than $\frac{1}{8}$ inch.

HABITAT: To subalpine. Forests, muskegs, openings.



Vaccinium uliginosum
bog blueberry

VAUL
Ericaceae

HABIT: Deciduous prostrate to upright much-branched shrub, 8–16 inches.

KEY CHARACTERS: Leaves alternate, pale and distinctly veined underneath, leathery. Flowers pink, terminal or from leaf bases. Fruit blue-black berries with bluish bloom.

HABITAT: Open forests, heaths, muskegs.



$\times \frac{1}{3}$

Vaccinium vitis-idaea
lowbush cranberry

VAVI
Ericaceae

HABIT: Evergreen creeping mat-forming shrub, 2–6 inches.

KEY CHARACTERS: Leaves alternate, edges slightly rolled under, shiny, leathery, with dark dots and brown hairs underneath. Flowers pink, terminal. Fruit red berries.

HABITAT: Spruce and birch forests, muskegs, tundra, dry alpine slopes, acidic poorly drained soil.



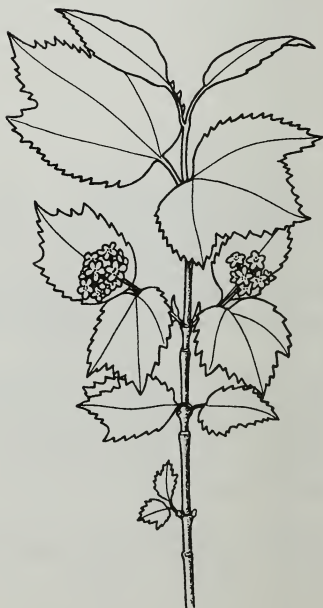
Viburnum edule
highbush cranberry

VIED
Caprifoliaceae

HABIT: Deciduous ascending many-stemmed shrub, 2–8 feet.

KEY CHARACTERS: Leaves opposite, 3-lobed, toothed. Buds dark red-brown. Flowers white, in dense terminal clusters. Fruit red-orange drupes.

HABITAT: Forests, thickets, muskegs, streambanks, beaches, tidal meadows.



FORBS

Achillea borealis
yarrow

ACBO
Compositae

HABIT: To 3 feet.

KEY CHARACTERS: Leaves alternate, 2–3 times pinnately divided, woolly, fragrant. Stem hairy. Flowers white, in several terminal clusters. Fruit hairless achenes.

HABITAT: To 5400 feet. Forests, meadows, sandy slopes, beaches.



Aconitum delphinifolium
monkshood

ACDE2
Ranunculaceae

HABIT: Thin, straight, to 3–50 inches.

KEY CHARACTERS: Leaves alternate, rounded in outline, palmately 5-lobed, hairless, few. Flowers dark blue, hooded, in few-flowered terminal raceme. Fruit follicles. Poisonous.

HABITAT: To alpine. Meadows, streambanks.



Actaea rubra
baneberry

ACRU2
Ranunculaceae

HABIT: Branched, 1–3 feet.

KEY CHARACTERS: Leaves alternate, ternate, toothed. No basal leaves. Flowers white, in a terminal raceme. Fruit red or white pea-sized berries.

HABITAT: Forests, streambanks, open slopes, beaches.



Anemone narcissiflora
narcissus anemone

ANNA
Ranunculaceae

HABIT: 2–25 inches.

KEY CHARACTERS: Basal leaves rounded in outline, palmately compound, the leaflets with many divisions. Stem leaves whorled. Stems and leaves often hairy. Flowers large, white to creamy white, few to several per stem, terminal. Fruit hairless achenes.

HABITAT: Meadows, snowbeds in tundra.



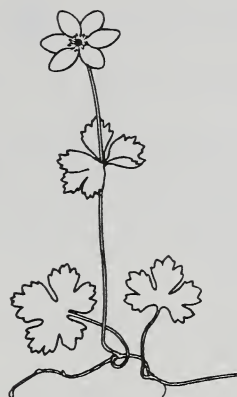
Anemone richardsonii
yellow anemone

ANRI
Ranunculaceae

HABIT: 2–12 inches.

KEY CHARACTERS: Leaves from rhizome, rounded, palmately 3-lobed, the lobes divided and toothed. Stem leaves in single whorl, with no petiole. Flowers yellow, solitary, terminal. Fruit hairless achenes with very long beak. Poisonous.

HABITAT: Meadows, snowbeds.



$\times \frac{1}{2}$

Angelica genuflexa
bent-leaved angelica

ANGE2
Umbelliferae

HABIT: 2–4½ feet.

KEY CHARACTERS: Stem leaves alternate, ternate to bipinnate, toothed, bending downward, with hairy edges and veins. Stem hollow, often purple. Flowers white to pinkish, in terminal umbel. Fruits with lateral wings.

HABITAT: Meadows, swamps, stream-banks, wet areas, beaches.



Angelica lucida
seacoast angelica

ANLU
Umbelliferae

HABIT: To 3 feet.

KEY CHARACTERS: Stem leaves alternate, 2–3 times ternate, toothed, with inflated petiole. Flowers greenish-white, in terminal umbel. Fruits with all ribs narrowly winged.

HABITAT: Meadows, thickets, wet areas, beaches.



Antennaria monocephala
pygmy pussytoes

ANMO9
Compositae

HABIT: Mat forming, with stolons, 1–6 inches tall.

KEY CHARACTERS: Basal leaves $\frac{1}{5}$ – $\frac{1}{2}$ inches long, grayish hairy to hairless below, mostly hairless above. Flower heads solitary.

HABITAT: Alpine tundra.



Apargidium boreale
apargidium

APBO
Compositae

HABIT: 4–20 inches.

KEY CHARACTERS: Leaves 2–10 inches long, $\frac{1}{10}$ – $\frac{1}{2}$ inches wide. Petals yellow, often drying whitish or pinkish.

HABITAT: Wet meadows.



Aquilegia formosa
western columbine

AQFO
Ranunculaceae

HABIT: Branched, 1–3 feet.

KEY CHARACTERS: Leaves mostly basal, white underneath, twice ternate. Stem leaves alternate. Flowers with red sepals and spurs with yellow petals. Flowers 2–4 per stem, terminal, nodding. Fruit hairy follicles.

HABITAT: Moist forests, meadows, open areas, beaches.



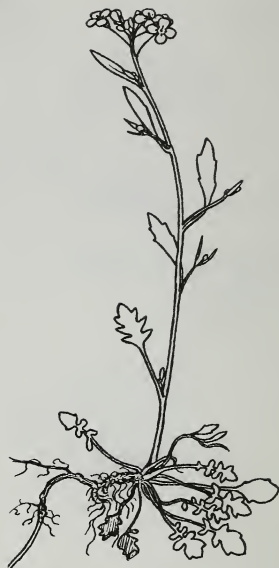
Arabis lyrata
lyreleaved rockcress

ARLY2
Cruciferae

HABIT: Branched, to 8 inches.

KEY CHARACTERS: Basal leaves red-dish-purple, lyre-shaped to pinnately divided. Stem leaves alternate, dull purple, pinnately divided to linear. Flowers white or pink, few to several in terminal raceme. Fruit hairless capsules (siliques).

HABITAT: Moist stony places, scree slopes.



Arnica latifolia
broadleaf arnica

ARLA8
Compositae

HABIT: 4–25 inches.

KEY CHARACTERS: Basal leaves smaller than the stem leaves, basal leaves usually withered by flowering time, stem leaves $\frac{3}{4}$ –4 inches long and $\frac{1}{2}$ –3 inches wide, usually toothed, petiole shorter than the blades. Flowers yellow, 1–5 per plant. Fruit achenes.

HABITAT: Open woods, meadows, heath.



Artemisia arctica
boreal sagebrush

ARAR9
Compositae

HABIT: Stems from a stout, woody base with short runners.

KEY CHARACTERS: Leaves at base bipinnately dissected into about 5–7 pairs, with linear, pointed, ultimate lobes. Stem leaves are reduced. Nodding dense cluster of flowers, the lower long-stalked. Yellow, fuzzy, disc flowers. Smooth fruit.

HABITAT: Meadows, in the mountains to 6500 feet.



Artemisia tilesii
Aleutian mugwort

ARTI
Compositae

HABIT: 1–4 feet.

KEY CHARACTERS: Leaves alternate, 1–2 times pinnately divided, hairy underneath. Flowers yellow, tinged with red, numerous nodding heads in spike-like inflorescences. Fruit hairless achenes.

HABITAT: Lowlands to mountains. Roadsides, gravelly or sandy areas.



Aruncus sylvestris
goatsbeard

ARSYA
Rosaceae

HABIT: 3–6 feet.

KEY CHARACTERS: Leaves alternate, ternate, doubly toothed. Flowers white, several in terminal clusters. Fruit upright follicles.

HABITAT: Moist forests, meadows, stream-banks.



$\times \frac{1}{2}$

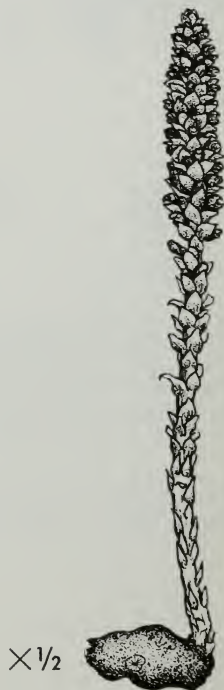
Boschniakia rossica
ground-cone

BORO
Orobanchaceae

HABIT: Cone-like, 4–16 inches.

KEY CHARACTERS: Leaves scale-like, yellowish to purplish. Flowers purplish, several in terminal inflorescence.

HABITAT: Forests, beaches. Commonly found under alder stands. Parasitic on alder roots.



$\times \frac{1}{2}$

Callitriche hermaphroditica CAHE2
northern waterstarwort Callitrichaceae

HABIT: Slender plants, 2–10 inches long.

KEY CHARACTERS: Linear 1–veined leaves with indentation at tip. Fruit with conspicuous wings. Plant dark green.

HABITAT: Submerged in shallow ponds.



Callitriche verna CAVE2
spring waterstarwort Callitrichaceae

HABIT: Slender plants, 2–10 inches long.

KEY CHARACTERS: Linear 1–veined leaves with indentation at tip. Fruit not distinctly winged. Plant light green.

HABITAT: Floating in shallow ponds, mud.



Caltha palustris
yellow marsh-marigold

CAPA5
Ranunculaceae

HABIT: Decumbent, 4–24 inches.

KEY CHARACTERS: Leaves basal and on stem, toothed. Stem hollow. Flowers yellow, often greenish or purplish on back, solitary, terminal, with 5–8 petal-like sepals. Fruit follicles, with hooked beak. Poisonous.

HABITAT: Slow running water, moist places.



Campanula lasiocarpa
mountain harebell

CALA7
Campanulaceae

HABIT: Stems from thin, branching rhizomes.

KEY CHARACTERS: Leaves at base are long-stalked, tear-shaped and pointed, entire or usually coarsely dentate. Stem leaves are not stalked and are gradually reduced. Single, large blue flowers with linear, pointed, narrow-lobed segments.

HABITAT: Alpine heaths, sandy tundra, in the mountains to at least 5000 feet.



Campanula rotundifolia CARO2
bluebells of Scotland Campanulaceae

HABIT: One to several prostrate to upright stems, to 8 inches.

KEY CHARACTERS: Leaves narrow, with few teeth. Flowers purplish-blue, solitary, terminal. Sepals bent backward. Fruit nodding capsules.

HABITAT: Open areas, grassy slopes, rock outcrops along coast.



Cardamine umbellata CAUM3
little western bittercress Cruciferae

HABIT: To 20 inches.

KEY CHARACTERS: Basal leaves with 1–3 pairs of leaflets and a 3-lobed terminal leaflet. Stem leaves alternate, with narrower leaflets. Flowers small, white, in terminal inflorescence. Fruit long, thin capsules (siliques).

HABITAT: Wet areas, disturbed areas.



Castilleja unalaschcensis CAUN4
Alaska Indian paintbrush Scrophulariaceae

HABIT: 8–32 inches.

KEY CHARACTERS: Stem leaves pubescent, with 3–5 veins. No basal leaves. Flower bracts yellowish, lobed, at top of stem. Fruit capsules.

HABITAT: Open forests, meadows, tidal flats.



Cicuta douglasii CIDO
western water hemlock Umbelliferae

HABIT: Stout with single stems, or a few together, from tuberous and chambered roots.

KEY CHARACTERS: Leaves 1–3 pinnate with serrate, oblong leaflets. Several umbels of flowers with 12–20 rays. Fruit ovate to circular. Poisonous.

HABITAT: Marshes, along streams.



Cicuta mackenzieana CIMA
Mackenzie's water hemlock Umbelliferae

HABIT: Stout, single stems or a few together, from tuberous roots.

KEY CHARACTERS: Leaves 1–3 pinnate, leaflets lanceolate and thin. Several umbels of flowers with 7–14 rays. Ripe fruit much broader than long. Poisonous.

HABITAT: Marshes.



Circaea alpina CIAL
enchanter's nightshade Onagraceae

HABIT: 2–10 inches.

KEY CHARACTERS: Leaves opposite, toothed. Flowers white to pink, in racemes, petals 2-lobed. Fruits covered with soft bristles.

HABITAT: Moist forests, streambanks, seeps, with Sitka alder along beaches.



Coeloglossum viride
longbract frog orchid

COVI6
Orchidaceae

HABIT: Single upright stem, 2½–25 inches.

KEY CHARACTERS: Stems with several leaves. Flowers green to yellowish green in several to many-flowered raceme.

HABITAT: Tundra, heath, woods, meadows.



Conioselinum chinense
western hemlock-parsley

COCHP
Umbelliferae

HABIT: 6–40 inches.

KEY CHARACTERS: Leaves alternate, 2–3 times pinnately compound, leaflets again lobed, with inflated petiole. Flowers white, in umbels. Fruits with lateral wings.

HABITAT: Meadows, sandy shores.



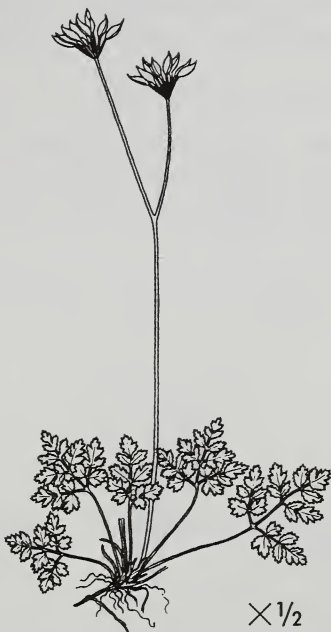
Coptis asplenifolia
fern leaf goldthread

COAS
Ranunculaceae

HABIT: Evergreen, 4–14 inches.

KEY CHARACTERS: Leaves basal, toothed, with 5 leaflets. Flowers white, 1–3 per plant, on long leafless stem. Fruit follicles, spreading in wheel-shape.

HABITAT: Forests, muskegs, moist places.



Coptis trifolia
trifoliate goldthread

COTR2
Ranunculaceae

HABIT: Evergreen, 2–6 inches.

KEY CHARACTERS: Leaves pale below, toothed, shiny, with 3 leaflets. Flowers white, solitary, on long leafless stem. Fruit follicles.

HABITAT: Forests, meadows, muskegs, tundra.



Cornus canadensis
bunchberry

COCA13
Cornaceae

HABIT: 2–8 inches.

KEY CHARACTERS: Leaves 4–6 in a terminal whorl with 1–2 pairs much smaller, opposite stem leaves below. Flower bracts white, petal-like. Fruit clustered red berries.

HABITAT: Spruce and birch forests, muskegs.



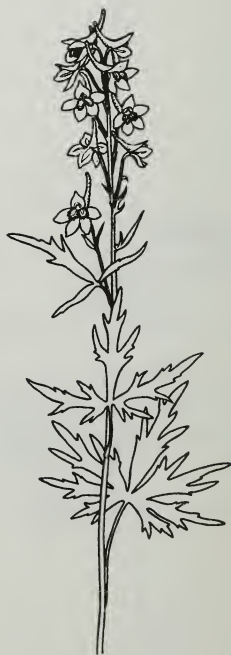
Delphinium glaucum
larkspur

DEGL3
Ranunculaceae

HABIT: 1½–5 feet.

KEY CHARACTERS: Leaves alternate, palmately 5–7 lobed, the lobes divided and toothed. Flowers dark violet-purple, spurred, in many-flowered terminal raceme. Fruit hairless follicles.

HABITAT: Wet meadows, streambanks.



Dodecatheon pulchellum
pretty shooting star

DOPU
Primulaceae

HABIT: 5-24 inches.

KEY CHARACTERS: Leaves basal, thick, with long, winged petiole. Flowers purplish-lavender with a yellow ring at base, several per long leafless stem. Fruit ovoid capsules.

HABITAT: Muskegs, open areas, saline meadows.



Drosera rotundifolia
round-leaf sundew

DRRO
Droseraceae

HABIT: 3 inches.

KEY CHARACTERS: Leaves in basal rosettes, nearly round, lying flat on the ground, with sticky red-stalked glands. Flowers white, several in leafless long-stemmed inflorescence. Fruit capsules.

HABITAT: Muskegs, swamps, wet areas.



Epilobium adenocaulon
northern willow herb

EPAD
Onagraceae

HABIT: Upright, branched. 4–30 inches

KEY CHARACTERS: Leaves mostly opposite, toothed. Flowers small, white to red. Fruit capsules.

HABITAT: Disturbed sites, roadsides.

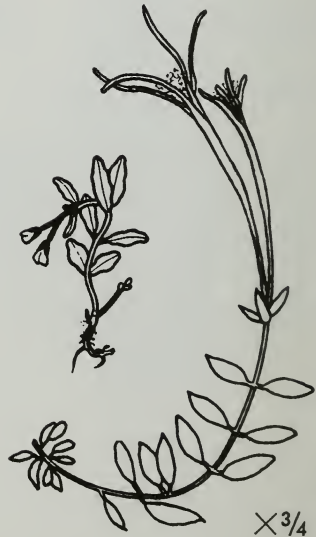


Epilobium anagalladifolium EPAN4
alpine willow herb Onagraceae

HABIT: Low-growing, single stem, 4–6 inches.

KEY CHARACTERS: Leaves opposite, small. Flowers small, reddish-violet to pink. Fruit capsules.

HABITAT: Moist places.



Epilobium angustifolium
tall fireweed

EPAN2
Onagraceae

HABIT: Unbranched, 1½–5 feet.

KEY CHARACTERS: Leaves alternate, pale and distinctly veined underneath. Stem densely leafy. Flowers large, lilac-purple, in terminal raceme. Fruit hairy capsules, 1–4 inches long.

HABITAT: Forests, meadows, gravel bars, beach fringe, burned areas.



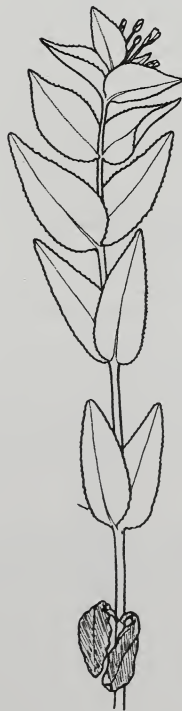
Epilobium glandulosum
fringed willow herb

EPGL4
Onagraceae

HABIT: 10–40 inches.

KEY CHARACTERS: Stems single or branched in upper portion of plant. Leaves mostly opposite, serrate. Petals pink to purplish.

HABITAT: Moist sites in woods, thickets, meadows, and beaches.



Epilobium hornemannii EPHO
Hornemann's willow herb Onagraceae

HABIT: 1½–10 inches.

KEY CHARACTERS: Stems mostly single. Leaves mostly opposite (the upper ones may be alternate), sparsely serrate. Petals lilac-pink.

HABITAT: Near seeps and springs, along streams, in moist meadows, bogs.



Epilobium latifolium EPLA
dwarf fireweed Onagraceae

HABIT: Decumbent, 4–12 inches.

KEY CHARACTERS: Leaves alternate, whitish, finely pubescent, fleshy, not veiny. Flowers large, purple or rose, numerous from leaf bases. Fruit purplish hairy capsules.

HABITAT: To 6000 feet. Meadows, steam-banks, river bars, scree slopes.



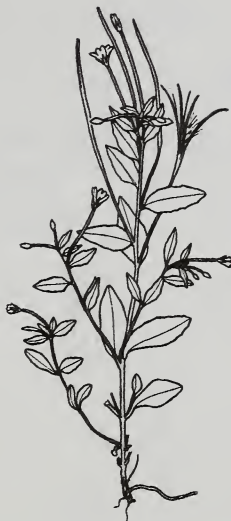
Epilobium leptocarpum
slenderfruit willow herb

EPLE
Onagraceae

HABIT: Many branched, usually less than 4 inches.

KEY CHARACTERS: Leaves mostly opposite, few teeth. Petals whitish to pink.

HABITAT: Moist places.



Epilobium palustre
swamp willow herb

EPPA
Onagraceae

HABIT: Branched or unbranched, 4–16 inches.

KEY CHARACTERS: Leaves opposite low on stem, alternate high on stem, narrow, with no petiole. Flowers small, pink or whitish. Fruit hairy capsules.

HABITAT: Meadows, muskegs, steam-banks, wet places.



Erigeron peregrinus
subalpine fleabane

ERPE3
Compositae

HABIT: 2–24 inches.

KEY CHARACTERS: Leaves alternate, with hairy edges and no petiole. Flowers white, pink, purple, or blue, usually 1 per plant and solitary, terminal. Fruit achenes.

HABITAT: Open forests, meadows, muskegs, alpine.



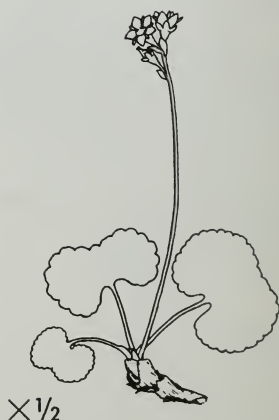
Fauria crista-galli
deer cabbage

FACR
Gentianaceae

HABIT: 8–12 inches.

KEY CHARACTERS: Leaves basal, kidney-shaped, fleshy, with rounded teeth and slightly notched tip. Flowers white, in leafless long-stemmed inflorescence. Fruit capsules.

HABITAT: Open forests, muskegs, swamps, wet meadows, seeps.



Fragaria chiloensis
beach strawberry

FRCH
Rosaceae

HABIT: Plant with stout rhizomes and long, brown stolons.

KEY CHARACTERS: Thick leaves with three leaflets, coarsely serrate, the upper surface green and shiny, the lower surface pale and usually hairy. Petals white. Fruit mostly at least ½ inches in diameter.

HABITAT: Along the coast in woods, meadows, and gravelly beaches.



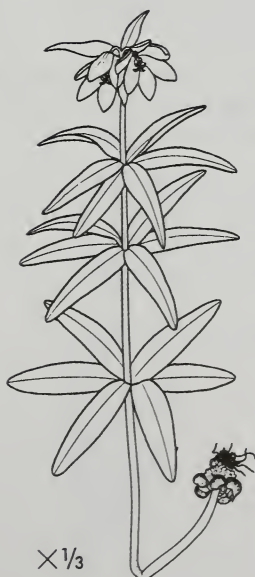
Fritillaria camschatcensis
chocolate lily

FRCA5
Liliaceae

HABIT: 8–24 inches.

KEY CHARACTERS: Leaves 5–9 in a whorl. Flowers purple-black, 1–several per stem, terminal, nodding, with unpleasant odor. Fruit capsules.

HABITAT: Meadows, tide flats.



Galium boreale
northern bedstraw

GABO2
Rubiaceae

HABIT: Upright, branched, 8–32 inches.

KEY CHARACTERS: Leaves 4 in a whorl, rounded at the tip, with 3 veins and no petiole. Stems square. Flowers white to cream, several in terminal inflorescences. Fruit with hairs.

HABITAT: Meadows, rocky slopes.



Galium trifidum
threepetal bedstraw

GATR2
Rubiaceae

HABIT: Weak, slender, branched stems with upper internodes rough to the touch, from slender rhizome.

KEY CHARACTERS: Leaves in whorls of 4, linear to oblong, blunt and bent downward. Whitish, lobed flowers, single or 3 together. Smooth fruit.

HABITAT: Wet places.



Galium triflorum
fragrant bedstraw

GATR3
Rubiaceae

HABIT: Perennial, sprawling, 8–40 inches long.

KEY CHARACTERS: Leaves 6 in a whorl, pointed at tip, with 1 vein and no petiole. Stems square and bristly. Flowers greenish-white, several per plant, usually 3 per stalk, from leaf bases. Fruits with hairs and prickles.

HABITAT: Moist forests, thickets, open areas.



Gentiana douglasiana
swamp gentian

GEDO
Gentianaceae

HABIT: Branched, 2–11 inches.

KEY CHARACTERS: Leaves opposite. Flowers white, bluish on outside, solitary, or in inflorescence, terminal or from leaf bases. Fruit oblong stalkless capsules.

HABITAT: Muskegs, wet meadows, alpine.



Gentiana glauca
pale gentian

GEGL
Gentianaceae

HABIT: 1–6 inches

KEY CHARACTERS: Smooth, yellowish-green leaves in clusters. Stem leaves in 1–3 pairs, elliptical to rounded. Inner flower blue, dark blue, or greenish-blue with ovate, obtuse lobes.

HABITAT: Meadows in the alpine and sub-alpine zones, to at least 5000 feet.



Gentiana platypetala
spotted gentian

GEPL
Gentianaceae

HABIT: 4–14 inches.

KEY CHARACTERS: Leaves opposite, with no petiole. No basal leaves. Flowers blue, mostly solitary, terminal, with no stalk. Fruit oblong capsules.

HABITAT: Sea level to alpine. Wet meadows, grassy slopes.



Geocaulon lividum
northern comandra

GELI2
Santalaceae

HABIT: To 6 inches.

KEY CHARACTERS: Leaves alternate, often bi-colored. No basal leaves. Flowers inconspicuous, from leaf bases, with no petals. Fleshy orange fruits.

HABITAT: Poplar flats, muskeg, dry places, tundra.



Geranium erianthum
northern geranium

GEER2
Geraniaceae

HABIT: 8–32 inches.

KEY CHARACTERS: Basal leaves round in outline, palmately 3–5 lobed, pubescent, with long petiole. Stem leaves with no petiole. Flowers rose or violet, 3–5 in clusters. Fruit pubescent.

HABITAT: Forests, meadows, streambanks, rocky areas, alpine, beaches.



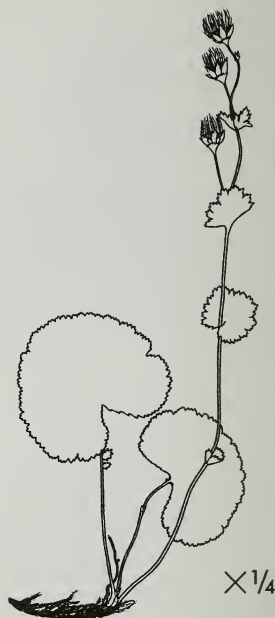
Geum calthifolium
calthaleaf avens

GECA6
Rosaceae

HABIT: Stems from dark, stout woody base.

KEY CHARACTERS: Leaves at base fuzzy on both sides, with short, yellow hairs. Very small lower lobes and a large, orbicular end lobe. Yellow, heart-shaped flower petals.

HABITAT: Wet meadows.



Geum macrophyllum
large-leaf avens

GEMA4
Rosaceae

HABIT: 11–40 inches.

KEY CHARACTERS: Basal leaves lyre-shaped and pinnately compound, hairy. Stem leaves with fewer leaflets. Stems hairy. Flowers yellow, several in inflorescences. Fruit hairy nutlets in burr-like heads.

HABITAT: Forests, muskegs, beaches.



Hedysarum alpinum
alpine sweetvetch

HEAL
Leguminosae

HABIT: Upright to decumbent stems, 4–40 inches tall.

KEY CHARACTERS: Compound leaves with 9–23 leaflets. Flowers in raceme from 1–7 inches long. Petals pink to pink purple (rarely white). Fruits are loments with 1–4 segments.

HABITAT: Alpine tundra, heath, woods.
Mostly on sandy or gravelly soils.



Heracleum lanatum
cow parsnip

HELA4
Umbelliferae

HABIT: 1½–6 feet.

KEY CHARACTERS: Leaves alternate, large, lobed and toothed, upper with inflated sheaths. Flowers white, in umbels. Fruit with lateral wings.

HABITAT: Forests, meadows, streambanks, beaches.



Heuchera glabra
alpine heuchera

HEGL5
Saxifragaceae

HABIT: 6–24 inches.

KEY CHARACTERS: Leaves mostly basal, 3–5 lobed, toothed. Flowers white, in long-stemmed inflorescence with 1–3 reduced leaves. Fruit capsules.

HABITAT: Streambanks, moist rocks, sea cliffs, alpine meadows along seeps.



Hieracium triste
woolly hawkweed

HITR2
Compositae

HABIT: 1–10 inches.

KEY CHARACTERS: Leaves at base tear- to spoon-shaped, entire with hairs in margin, long-stalked, smooth above, sparsely fuzzy beneath. Large terminal flower heads, with grayish, long, soft hairs. Short, yellow ligules.

HABITAT: Stony slopes.



Hippuris tetraphylla
fourleaf marestalk

HITE
Haloragaceae

HABIT: Stem from stout, creeping rhizome.

KEY CHARACTERS: Leaves 4–6 in a whorl, $\frac{1}{10}$ – $\frac{1}{2}$ inches wide, entire, not pointed, and shorter than the internodes.

HABITAT: Shallow ponds and mud flats.



$\times \frac{1}{2}$

Hippuris vulgaris
common marestalk

HIVU2
Haloragaceae

HABIT: Stem from stout, creeping rhizome

KEY CHARACTERS: Leaves 6–12 in a whorl, linear, entire, pointed and longer than the internodes. In submerged forms thin, pale green. Small flowers in leaf-notch of submerged leaves.

HABITAT: Shallow ponds, streams, and mud flats.



$\times \frac{1}{2}$

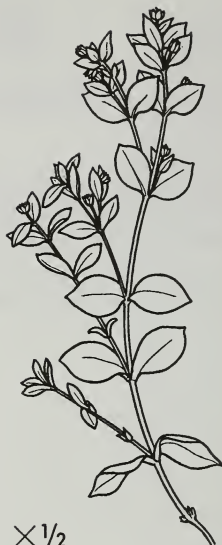
Honckenya peploides
seaside sandplant

HOPE
Caryophyllaceae

HABIT: Forming loose to dense mats 4–30 inches broad or more, from deep taproot and horizontal stolons/rhizomes.

KEY CHARACTERS: Leaves opposite, fleshy, lower leaves smaller than those of the middle stem, stem leaves 3–10 pairs or more. Flowers solitary in the upper leaf axils, petals white or greenish-white.

HABITAT: Maritime beaches.



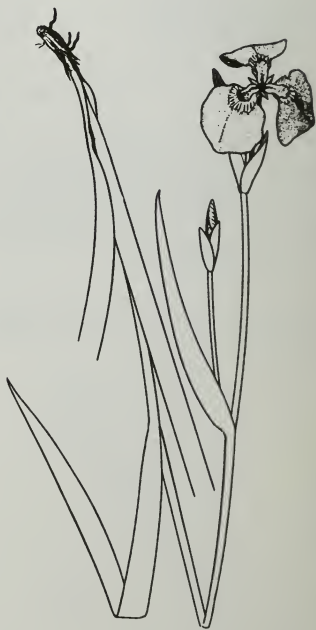
Iris setosa
wild iris

IRISE
Iridaceae

HABIT: 12–28 inches.

KEY CHARACTERS: Leaves sword-shaped. Flowers large, blue with dark veins, few per plant. Fruit capsules. Poisonous.

HABITAT: Meadows, shores, tidal flats.



Lathyrus maritimus
beach pea

LAMA3
Leguminosae

HABIT: From rhizomes.

KEY CHARACTERS: Fuzzy. Leaves with 6–12 leaflets, tendrils simple to branched. Stipules leaf-like. Pink-purple flowers.

HABITAT: In coastal areas on beaches, strands, and cliff bases.



Lathyrus palustris
vetchling

LAPA4
Leguminosae

HABIT: From slender rhizomes.

KEY CHARACTERS: Fuzzy. Leaves with 4–8 linear leaflets, branched tendrils. Stipules much smaller than the leaflets. Winged stem. Bluish-violet flowers.

HABITAT: Meadows, tidal flats, beaches, woods, lake shores.



Ligusticum scoticum
beach lovage

LISC3
Umbelliferae

HABIT: Single stemmed, smooth and red-dish-violet at the base, from a thick root.

KEY CHARACTERS: Thick leaves, divided into threes with ovate, coarsely-toothed leaflets. Stem leaves reduced, with long, often violet, sheaths. Flowers in rays of 7-11 umbels, with white or pinkish petals. Fruit has 3 winged ribs on back.

HABITAT: Seashores.



$\times \frac{1}{3}$

Listera borealis
northern twayblade

LIBO4
Orchidaceae

HABIT: To 8 inches.

KEY CHARACTERS: Leaves paired on stem. Flowers green or yellowish-green, in terminal raceme. Lowest petal with 2 broad lobes. Fruit capsules.

HABITAT: Moist forests, muskegs.



Listera caurina
western twayblade

LICA10
Orchidaceae

HABIT: 4–14 inches.

KEY CHARACTERS: Leaves paired on stem. Flowers yellowish-green, in terminal raceme. Lowest petal rounded at tip. Fruit capsules.

HABITAT: Evergreen forests.



Listera cordata
heart-leaf twayblade

LICO6
Orchidaceae

HABIT: 3–10 inches.

KEY CHARACTERS: Leaves paired on stem, heart-shaped at base. Flowers green or dark purple, in terminal raceme. Lowest petal with 2 linear lobes. Fruit capsules.

HABITAT: Forests.



Lloydia serotina
common alplily

LLSE
Liliaceae

HABIT: Upright, 2–6 inches.

KEY CHARACTERS: Basal leaves linear, $\frac{3}{4}$ –3 inches long. Stem leaves alternate, reduced upward, linear, $\frac{2}{5}$ –1½ inches long. Flowers creamy white.

HABITAT: Alpine tundra and heath.



Lupinus nootkatensis
Nootka lupine

LUNO
Leguminosae

HABIT: 1–4 feet.

KEY CHARACTERS: Leaves alternate, white to brown pubescent on both sides or hairless above, with 5–9 palmately compound leaflets. Flowers blue, in densely pubescent terminal raceme. Fruit peapod-like, black. Poisonous.

HABITAT: Sea level to alpine. Open forests, gravel bars, dry slopes, beaches.



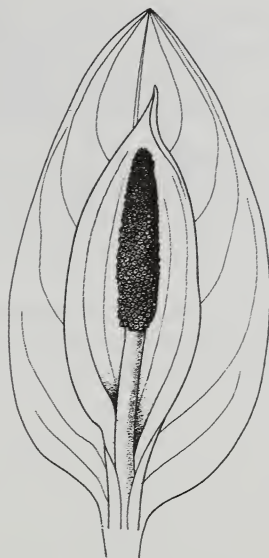
Lysichiton americanum
skunk cabbage

LYAM3
Araceae

HABIT: 1–5 feet.

KEY CHARACTERS: Leaves in basal cluster, 12–51 inches long, fleshy. Flowers small, green, in terminal spike, surrounded by yellow bract. Fruit green to red berries. With unpleasant odor.

HABITAT: Wet forests, edges of muskegs, marshes, streambanks.



Lysimachia thyrsiflora
tufted loosestrife

LYTH2
Primulaceae

HABIT: Upright, 8–30 inches.

KEY CHARACTERS: Lower leaves scale-like. Middle and upper leaves opposite, 1–6 inches long, $\frac{1}{8}$ – $2\frac{1}{2}$ inches wide, dotted with black glands. Flowers on long peduncles in dense racemes from the leaf axils.

HABITAT: Along streams, lake shores, and ponds.



$\times \frac{1}{3}$

Maianthemum dilatatum
deerberry

MADI
Liliaceae

HABIT: Evergreen, 8–23 inches.

KEY CHARACTERS: 2–3 alternate stem leaves, heart- to arrowhead-shaped, parallel veined. Flowers cream to white, in terminal raceme. Fruit red and white mottled berries.

HABITAT: Moist forests, meadows, alder thickets, streambanks, lakeshores, open grassy beach forests.



Menyanthes trifoliata
buckbean

METR3
Gentianaceae

HABIT: Aquatic submerged, to 10 inches.

KEY CHARACTERS: Leaves with 3 leaflets. Flowers white to pink, in terminal raceme, petals with long white hairs. Fruit capsules.

HABITAT: Muskegs, swamps, ponds, wet meadows.



Mertensia paniculata
chiming bells

MEPA
Boraginaceae

HABIT: 18–30 inches.

KEY CHARACTERS: Basal leaves with long, winged petiole. Stem leaves alternate, with minute petiole. Flowers blue, in leafless long-stemmed racemes, nodding. Fruit nutlets.

HABITAT: Forests, streambanks, subalpine meadow, gravel bars.



Minuartia arctica
arctic stitchwort

MIAR3
Caryophyllaceae

HABIT: Upright, branched, to 4 inches.

KEY CHARACTERS: Leaves opposite, hairy underneath and on edges. Largest leaves at middle of stem. Basal leaves narrowly linear. Stem hairy. Flowers white, upright, solitary or 2–5 in terminal inflorescence. Fruit egg-shaped capsules.

HABITAT: Forests, dry meadows, thickets, gravel bars, beaches.



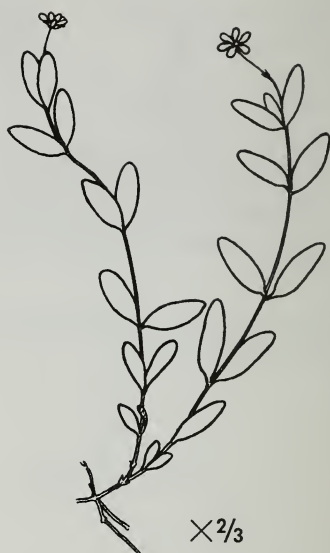
Moehringia lateriflora
grove sandwort

MOLA6
Caryophyllaceae

HABIT: Upright, branched, to 4 inches.

KEY CHARACTERS: Leaves opposite, hairy underneath and on edges. Largest leaves at middle of stem. Stem hairy. Flowers white, upright, solitary or 2-5 in terminal inflorescence. Fruit egg-shaped capsules.

HABITAT: Forests, dry meadows, thickets, gravel bars, beaches.



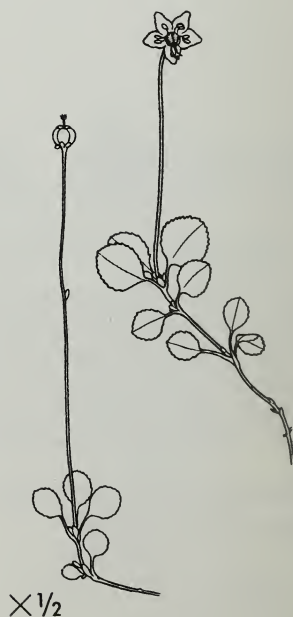
Moneses uniflora
single delight

MOUN2
Pyrolaceae

HABIT: 2-6 inches.

KEY CHARACTERS: Leaves rounded, toothed. Flowers white, waxy, fragrant, nodding, 1 per plant, on long 1-2-bracted stalk. Fruit upright capsules.

HABITAT: Dense forests on rotten wood, organic soil at low elevation.



Myosotis alpestris
forget-me-not

MYAL
Boraginaceae

The Alaska State Flower

HABIT: To 20 inches.

KEY CHARACTERS: Basal leaves pubescent, with long petiole. Stem leaves alternate, pubescent, with no petioles. Flowers blue with yellow center, in terminal inflorescence, upright. Fruit nutlets.

HABITAT: Meadows, rocky areas, alpine and subalpine.



Myriophyllum sibiricum
shortspike watermilfoil

MYSI
Haloragaceae

HABIT: Stem from elongated, creeping rhizome.

KEY CHARACTERS: Pinnate leaves, usually forming a whorl. Spike emerging above water. Female flower has small petals, male flower has larger petals.

HABITAT: Shallow water.



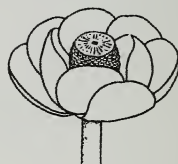
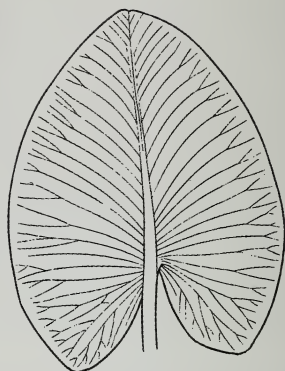
Nuphar polysepala
yellow pondlily

NUPO2
Nymphaeaceae

HABIT: Stout herbaceous plant from submerged rhizomes.

KEY CHARACTERS: Leaves with petioles to 40 inches long or longer, the blades floating to emergent, leathery, 3–10 inches long, 4–9 inches wide. Flowers yellowish to purple.

HABITAT: Ponds and slowly flowing streams.



Osmorhiza depauperata
blunt-fruit sweet-cicely

OSDE
Umbelliferae

HABIT: 6–28 inches.

KEY CHARACTERS: Leaves alternate, 1–3 times ternate, the leaflets again lobed and toothed. Flowers greenish-white or white, in umbel. Fruits club-shaped, hairy at base, $\frac{1}{2}$ –1 inch long.

HABITAT: Forests.



$\times \frac{1}{3}$

Osmorhiza purpurea
Sitka sweet-cicely

OSPU
Umbelliferae

HABIT: 12–40 inches.

KEY CHARACTERS: Leaves alternate, 1–3 times-ternate, the leaflets again lobed and toothed. Flowers green to purple, in umbel. Fruits widest at middle, hairy, shorter than $\frac{1}{2}$ inch.

HABITAT: Forests, steambanks.



Oxytropis nigrescens
blackish oxytrope

OXNI
Leguminosae

HABIT: Tufted to loosely matted.

KEY CHARACTERS: Leaves with 5–15 leaflets, leaflets hairy on both sides. Inflorescences with usually 2–3 flowers, petals purplish to blue.

HABITAT: Alpine tundra, heath, stony slopes.

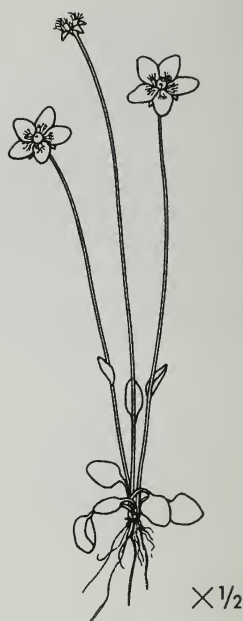


Parnassia palustris PAPA8
northern grass-of-parnassus Saxifragaceae

HABIT: 4–18 inches.

KEY CHARACTERS: Leaves mostly basal, with short petioles. Flowers white, 1–several per plant, solitary, on long 1-leaved stem. Fruit capsules.

HABITAT: Heaths, wet meadows.



Pedicularis capitata PECA2
capitate lousewort Scrophulariaceae

HABIT: Single stem, 2–6 inches tall.

KEY CHARACTERS: Leaves pinnately compound, the leaflets lobed or dissected. Inflorescence in a head of 1–8 flowers, petals cream colored.

HABITAT: Alpine tundra, heath, rocky slopes.



Pedicularis kanei
woolly lousewort

PEKA7
Scrophulariaceae

HABIT: Single stem, hairy in the inflorescence, 2–10 inches tall.

KEY CHARACTERS: Leaves pinnately compound, the leaflets dissected into many segments. Inflorescence elongated and many flowered, petals rose pink to lavender.

HABITAT: Alpine tundra, heath, rocky areas.



Pedicularis labradorica
Labrador lousewort

PELA
Scrophulariaceae

HABIT: Branched or unbranched, 6–10 inches.

KEY CHARACTERS: Leaves alternate, pinnately divided. Stem with white hairs. Flowers yellow or reddish, several per plant, upper petal forming hood enclosing stamens. Fruit capsules.

HABITAT: To alpine. Forests.



Pedicularis langsdorfii PELA3
Langsdorf's lousewort Scrophulariaceae

HABIT: Single stem, 2–9 inches tall.

KEY CHARACTERS: Leaves lobed to pinnatifid, the lobes toothed or smooth. Inflorescence in an elongated head, several to many-flowered, flowers rose pink to pink-purple.

HABITAT: Dry to moist tundra and heathlands.



Pedicularis parviflora PEPA4
smallflower lousewort Scrophulariaceae

HABIT: Simple stem, or mostly branched from the base.

KEY CHARACTERS: Leaves along stem oblong and deeply pinnately lobed, with dentate segments. Flowers in 2 parts, rose-colored, lower lip 3-lobed and broader than long.

HABITAT: Swamps, muskeg.



Pedicularis verticillata PEVE
whorled lousewort Scrophulariaceae

HABIT: Stems single or several, 3–16 inches tall.

KEY CHARACTERS: Basal leaves with long petioles. Stem leaves with short petioles or sessile, whorled. All leaves pinnatifid, the lobes toothed or incised. Inflorescence in a head or elongate with many flowers, flowers rose pink.

HABITAT: Alpine tundra, heath, meadows, woods, rocky slopes.



Petasites hyperboreus PEHY5
arctic sweet coltsfoot Compositae

HABIT: Simple stems, from creeping rootstocks, with reddish scales.

KEY CHARACTERS: Leaves deeply lobed into 3–5 broad, grossly toothed segments, smooth above with white fuzz beneath. Flowers purplish.

HABITAT: Wet tundra, shores, along creeks.



Pinguicula vulgaris
common butterwort

PIVU
Lentibulariaceae

HABIT: 3–7 inches.

KEY CHARACTERS: Leaves in basal rosette, shiny, fleshy. Flowers blue to violet, longer than $\frac{1}{2}$ inch, 1–2 per plant, solitary, on long leafless stems, nodding, with blunt or pointy spur. Fruit spherical capsules.

HABITAT: Wet areas.



Plantago maritima
goosetongue plantain

PLMA3
Plantaginaceae

HABIT: 3–7 inches.

KEY CHARACTERS: Leaves linear-lanceolate in basal rosette, shiny, fleshy. Flowers blue to violet, longer than 1 inch, 1–2 per plant, solitary, on long leafless stems, nodding, with blunt or pointy spur. Fruit spherical capsules.

HABITAT: Wet areas.



Platanthera dilatata
boreal bog orchid

PLDI3
Orchidaceae

HABIT: Stems from fleshy, rootlike tuberoids.

KEY CHARACTERS: Leaves ovate to lanceolate. Many-flowered spike with white flowers, sweet-scented.

HABITAT: Wet meadows, bogs.



Platanthera saccata
slender bog orchid

PLSA6
Orchidaceae

HABIT: Upright, 6–20 inches.

KEY CHARACTERS: Stems with several leaves, oblanceolate to lanceolate. Inflorescence a few to many-flowered raceme. Flowers greenish.

HABITAT: Open woods, thickets, muskegs, meadows.



Polemonium acutiflorum
tall Jacob's-ladder

POAC
Polemoniaceae

HABIT: 8–40 inches.

KEY CHARACTERS: Leaves alternate, with several hairless pinnately compound leaflets. Stem hairy. Flowers blue to violet, several per plant, with pointy, hairy-edged petals. Fruit round capsules.

HABITAT: Streambanks, wet meadows.



Polygonum viviparum
alpine bistort

POVI3
Polygonaceae

HABIT: Thick, hard, usually contorted rhizome.

KEY CHARACTERS: Leaves from base lanceolate-oblong, shiny above, grayish below, smooth. Spike with lower flowers replaced by bulblets with white or pink flowers.

HABITAT: Dry meadows, heaths, to at least 7000 feet.



Potamogeton filiformis POFI2
slender-leaved pondweed Potamogetonaceae

HABIT: Threadlike stem, branched especially at the base.

KEY CHARACTERS: Bristlelike leaves, brownish-green and blunt. Long flower stalk, spike with 3–4, usually widely separated whorls of flowers.

HABITAT: Shallow water.



Potamogeton natans PONA4
floating pondweed Potamogetonaceae

HABIT: Rounded stem up to 40 inches long.

KEY CHARACTERS: Submerged leaves linear with no differentiation between the blade and the petiole. Floating leaves up to $3\frac{1}{2}$ inches long and $1\frac{1}{2}$ inches wide, thick, with many prominent parallel veins. Green fruits on a spike $1\frac{1}{2}$ –2 inches long.

HABITAT: Lakes, ponds, streams with sluggish water.



Potamogeton pectinatus POPE6
sago pondweed Potamogetonaceae

HABIT: Rounded stem up to 15 inches long.

KEY CHARACTERS: Leaves all submerged, hairlike. Fruits in about 5 whorls on a spike.

HABITAT: Lakes and ponds (often with saline or brackish water).



Potamogeton perfoliatus POPER5
claspingleaf pondweed Potamogetonaceae

HABIT: Rounded stem up to 40 inches long.

KEY CHARACTERS: All leaves submerged. Stem densely covered with ovate, dark-green leaves, often clasping the stem all around. Short, curved flower stalk with a brown spike.

HABITAT: Lakes.



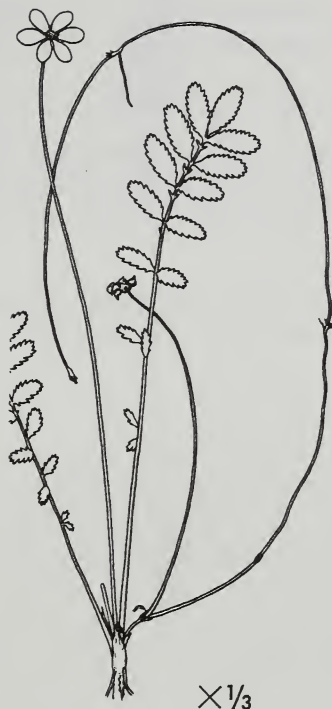
Potentilla egedii
Pacific silverweed

POEG
Rosaceae

HABIT: Hairy stolons.

KEY CHARACTERS: All leaves are at or near the base, compound, completely or almost completely smooth, with 2–5 pairs of leaflets. Single-flowered with yellow petals.

HABITAT: Often found in wet places.



Potentilla palustris
marsh fivefinger

POPA14
Rosaceae

HABIT: Prostrate to ascending, 4–40 inches.

KEY CHARACTERS: Leaves toothed, pale and pubescent underneath, with 5–7 leaflets. Flowers brownish-purple, several per plant. Fruit achenes.

HABITAT: Wet meadows, streams, shallow water.



Prenanthes alata
rattlesnake root

PRAL
Compositae

HABIT: 8–30 inches.

KEY CHARACTERS: Leaves alternate, white below, arrowhead-shaped, toothed. Flowers white, several per plant. Fruit achenes.

HABITAT: Streambanks, wet open areas, beach fringe, subalpine forests.



Primula cuneifolia
wedgeleaf primrose

PRCU
Primulaceae

HABIT: Stem up to 3 inches long. Leaves all basal.

KEY CHARACTERS: Leaves thick, 5–11 teeth at apex. Inflorescence an umbel with 1–9 flowers. Petals pink to rose or white.

HABITAT: Alpine tundra, heath, wet meadows.



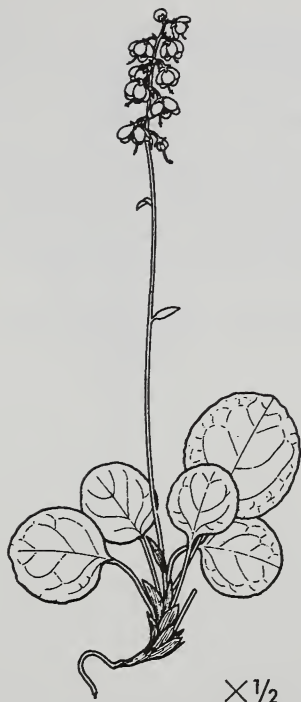
Pyrola asarifolia
liverleaf wintergreen

PYAS
Pyrolaceae

HABIT: Perennial, 5–16 inches.

KEY CHARACTERS: Leaves basal, purplish underneath, rounded, toothed, leathery. Flowers crimson to pink, nodding, several in 1–3 bracted, long-stemmed terminal raceme, nodding, style long and curved. Fruit capsules.

HABITAT: Forests, gravelly open areas, beach forests.



Pyrola chlorantha
greenish wintergreen

PYCH
Pyrolaceae

HABIT: Perennial, $\frac{1}{2}$ –1 inch.

KEY CHARACTERS: Leaves basal, small, round, toothed, leathery. Flowers pale yellowish or greenish-white, few–10 in long leafless raceme, style curved. Fruit capsules.

HABITAT: Forests.

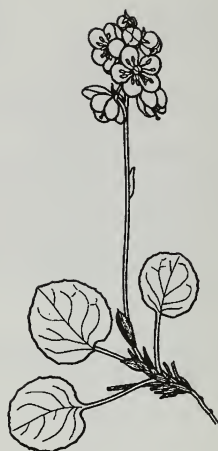


Pyrola grandiflora PYGR
largeflowered wintergreen Pyrolaceae

HABIT: 2½–5 inches.

KEY CHARACTERS: Leaves basal, the blades thick, lustrous, rounded.
Inflorescence a 4–11 flowered raceme.
Petals white or greenish-white.

HABITAT: Alpine tundra, heath, woods.



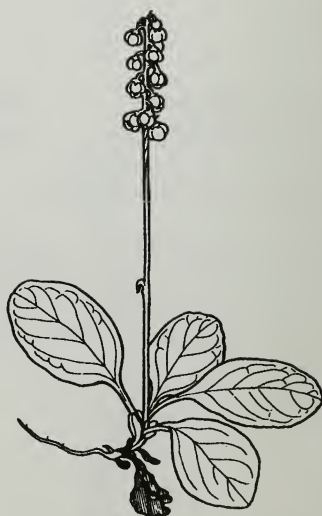
$\times \frac{1}{2}$

Pyrola minor PYMI
snowline wintergreen Pyrolaceae

HABIT: 2½–5 inches.

KEY CHARACTERS: Leaves basal.
Inflorescence a 5–13 flowered raceme.
Petals white or pinkish.

HABITAT: Meadows, heath, woods.



$\times \frac{1}{2}$

Pyrola secunda
one-sided wintergreen

PYSE
Pyrolaceae

HABIT: Perennial, 3–8 inches.

KEY CHARACTERS: Leaves mostly basal, toothed. Flowers greenish-white, several in 1–5 bracted long-stemmed one-sided inflorescence. Fruit capsules.

HABITAT: Open forests.



Ranunculus cymbalaria
seaside buttercup

RACY
Ranunculaceae

HABIT: Tufted, threadlike stolons.

KEY CHARACTERS: Rounded, kidney-or heart-shaped leaves. Small flowers with usually 5 yellow petals. Ovate to cylindrical fruiting head and a hairy receptacle.

HABITAT: Moist places, brackish water, sometimes apparently spread by human activity.



Ranunculus occidentalis
western buttercup

RAOC
Ranunculaceae

HABIT: 3–25 inches.

KEY CHARACTERS: Basal leaves 3-parted, the parts lobed or toothed. Stem leaves alternate, with no petiole. Flowers yellow, several per plant, solitary. Fruit achenes in hemispherical head.

HABITAT: Moist meadows, tundra.



Ranunculus trichophyllus
white water crowfoot

RATR
Ranunculaceae

HABIT: Aquatic, stems floating or submerged, 8–80 inches long.

KEY CHARACTERS: Leaves dark green, finely dissected into hairlike segments, the upper leaves palmately divided into 3–5 lobes. Flowers white.

HABITAT: Ponds and streams.



Rhinanthus minor
yellow rattle

RHMI13
Scrophulariaceae

HABIT: Somewhat branched or unbranched, to 30 inches.

KEY CHARACTERS: Leaves opposite, narrow, toothed. Flowers yellow, numerous. Fruit capsules.

HABITAT: Meadows, disturbed areas, beaches.



Rubus arcticus
nagoonberry

RUAR
Rosaceae

HABIT: 1–6 inches.

KEY CHARACTERS: Leaves alternate, palmately compound or 3-lobed. Flowers pink, few per plant, usually solitary, terminal, with narrow petals. Fruit red to purplish.

HABITAT: Forests, meadows, muskegs, streambanks, beach fringe.



Rubus chamaemorus
cloudberry

RUCH
Rosaceae

HABIT: 2–12 inches.

KEY CHARACTERS: Leaves roundish, 3–5 lobed, toothed, leathery. Flowers white, solitary, terminal. Fruits yellow-orange when ripe.

HABITAT: Meadows, muskegs, alpine.



Rubus pedatus
fiveleaf bramble

RUPE
Rosaceae

HABIT: Trailing, 1–4 inches.

KEY CHARACTERS: Leaves toothed, with 5 palmately compound leaflets. Flowers white, solitary, on few-bracted stalk. Fruits red.

HABITAT: Forests, meadows, muskegs.



Rumex fenestratus
western dock

RUFE3
Polygonaceae

HABIT: Upright from taproots, 20–80 inches, usually unbranched below the inflorescence.

KEY CHARACTERS: Lower leaves up to 12 inches long, the upper leaves smaller. Inflorescence a dense panicle.

HABITAT: Marshes, beaches, stream banks, tidal flats.



Sanguisorba stipulata
Sitka burnet

SAST11
Rosaceae

HABIT: 10–30 inches.

KEY CHARACTERS: Leaves pinnately compound, toothed. Flowers greenish-white, in a dense, long-stemmed, 1–3 inch spike with 1–3 reduced leaves, stamens very long and conspicuous. Fruit achenes.

HABITAT: Meadows, muskegs, swamps, tundra.



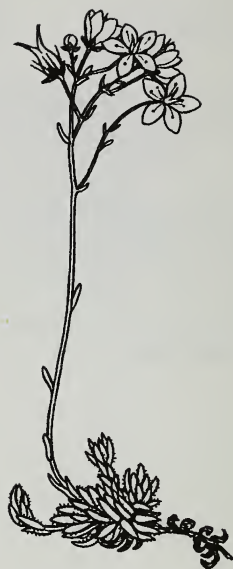
Saxifraga bronchialis
yellowdot saxifrage

SABR6
Saxifragaceae

HABIT: 1–6 inches.

KEY CHARACTERS: Leaves leathery, with no petiole, pointed tips, and stout hairs on edges. Flowers white or cream, spotted with yellow or red, in several-leaved long-stemmed inflorescence. Fruit capsules.

HABITAT: Rocky soil, rock crevices, cliffs, tundra.



×²/₃

Saxifraga punctata
heart-leaved saxifrage

SAPU6
Saxifragaceae

HABIT: 2–24 inches.

KEY CHARACTERS: Leaves kidney-shaped, with many large teeth. Flowers white to pink, in leafless long-stemmed inflorescence. Fruit capsules.

HABITAT: Streambanks, open areas, alpine meadows.



×¹/₃

Saxifraga tricuspidata
prickly saxifrage

SATR5
Saxifragaceae

HABIT: Evergreen, 1–10 inches.

KEY CHARACTERS: Leaves brownish-green, leathery, with 3 teeth and hairy edges. Flowers white with yellow spots at base and red spots at tip, in long-stemmed inflorescence with several reduced leaves. Fruit capsules.

HABITAT: Gravelly slopes, rock crevices, cliffs, ridges, tundra.



Sedum rosea
roseroot stonecrop

SEROI3
Crassulaceae

HABIT: Upright from thick rhizome, 3–10 inches.

KEY CHARACTERS: Stem with many leaves. Leaves reduced and scalelike on the lower stem, becoming larger higher up. Flowers purple.

HABITAT: Scree slopes, rocky places, alpine tundra, heath, open woods.



Senecio triangularis
arrowleaf groundsel

SETR
Compositae

HABIT: 1–4 feet.

KEY CHARACTERS: Leaves alternate, triangular, toothed. No basal leaves. Flowers yellow, several in flat-topped inflorescences. Fruit hairless achenes.

HABITAT: Streambanks, wet meadows, open areas.



Solidago multiradiata
northern goldenrod

SOMU
Compositae

HABIT: Upright, 4–20 inches.

KEY CHARACTERS: Leaves alternate, toothed, with hairy edges at base. Flowers small, yellow, several in dense inflorescence. Fruit hairy achenes.

HABITAT: From lowlands to the lower alpine. Meadows, open areas, rocky soil.



Sparganium angustifolium SPAN2
floating burreed Sparganiaceae

HABIT: Aquatic plant with stems 6–25 inches long.

KEY CHARACTERS: Leaves usually floating, distinctly named. Fruit with pointed beak longer than $\frac{1}{20}$ inches.

HABITAT: Ponds and sluggish streams.



Sparganium hyperboreum SPHY
northern burreed Sparganiaceae

HABIT: Aquatic plant with stems 4–10 inches long.

KEY CHARACTERS: Leaves upright or floating. Fruit nearly beakless.

HABITAT: Ponds and lakes.



Sparganium minimum
small burreed

SPMI
Sparganiaceae

HABIT: Aquatic plant with stems up to 15 inches long.

KEY CHARACTERS: Leaves upright or floating, lacking median nerve. Fruit with short cone-shaped beak.

HABITAT: Ponds and lakes.



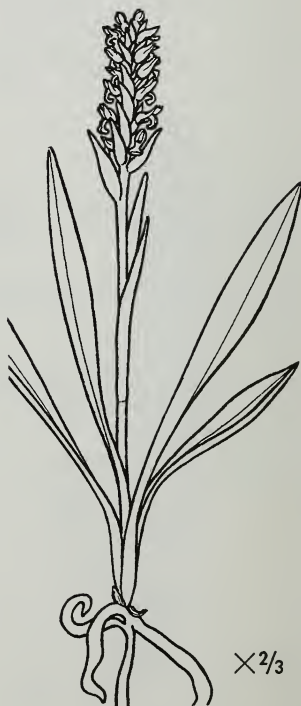
Spiranthes romanzoffiana
hooded ladies' tresses

SPRO
Orchidaceae

HABIT: Stem leafy in lower part, from fleshy tuberoid roots.

KEY CHARACTERS: Flowers in 3 spiral rows, fragrant and white to creamy. Sepals and 2 petals forming hood, lip constricted above the middle with a terminal round to ovate lobe.

HABITAT: Bogs, marshes, in mountains to at least 3000 feet.



Stellaria calycantha
northern starwort

STCA
Caryophyllaceae

HABIT: Weak stem, curving upward,
branching, smooth or slightly rough.

KEY CHARACTERS: Leaves without
stalks, opposite, ovate-lanceolate, pointed.
Single flowers in forks of stem.

HABITAT: Wet places.



Stellaria crassifolia
fleshy starwort

STCR
Caryophyllaceae

HABIT: Forms mats or clumps, stems 1–10
inches long.

KEY CHARACTERS: Leaves opposite,
without petiole, mostly much longer than
broad. Flowers 1–3 in open cymes, petals
white.

HABITAT: Muskegs, open woods, lake
shores, snow beds.



Stellaria crispa
curled starwort

STCR2
Caryophyllaceae

HABIT: Forms mats, stems 4–20 inches long.

KEY CHARACTERS: Leaves opposite, without petiole, egg-shaped in outline, sharply pointed at the apex. Flowers solitary in leaf axils, petals usually lacking.

HABITAT: Wet soil in woods, on stream banks, and on beaches.



Stellaria sitchana
Sitka starwort

STSI3
Caryophyllaceae

HABIT: Forms clumps, stems up to 20 inches long.

KEY CHARACTERS: Leaves opposite, without petiole, mostly much longer than broad. Inflorescences mostly open cymes with several to many flowers, petals usually absent (white when present).

HABITAT: Wet meadows, river banks, thickets, open woods.



Streptopus amplexifolius STAM2
twistedstalk Liliaceae

HABIT: Upright, branched, 10–40 inches.

KEY CHARACTERS: Leaves alternate, clasping stem, with prominent veins. Flowers white, 1–2 per stalk, from leaf bases. Fruit red berries.

HABITAT: Forests.



Subularia aquatica SUAQ
awlwort Cruciferae

HABIT: Aquatic, often submerged, stem up to 4 inches tall.

KEY CHARACTERS: Leaves linear and tapering to a sharp point. Flowers very small, petals white.

HABITAT: Ponds, streams, shores.



Swertia perennis
star gentian

SWPE
Gentianaceae

HABIT: Smooth, straight stem, simple,
from woody base.

KEY CHARACTERS: Leaves at base
long-stalked, elliptic to oblong, entire.
Upper stem leaves not stalked, alternate or
in pairs, somewhat pointed. Flowers
5-lobed and pointed, grayish-blue, mottled,
variable in color, rarely white.

HABITAT: Subalpine meadows.



Thalictrum sparsiflorum
fewflower meadowrue

THSP
Ranunculaceae

HABIT: To 4 feet.

KEY CHARACTERS: Leaves alternate,
2-3 times ternate. Flowers pinkish-white,
no petals. Fruit achenes.

HABITAT: Forests, meadows.



Tiarella trifoliata
foamflower

TITR
Saxifragaceae

HABIT: Perennial, 6–20 inches.

KEY CHARACTERS: Leaves mostly basal, toothed, with 3 leaflets. Flowers white, in 1–2 leaved long-stemmed inflorescence. Fruit sugarscoop-like capsules.

HABITAT: Forests, meadows, seeps, flood-plains.



Tofieldia coccinea
northern asphodel

TOCO
Liliaceae

HABIT: Tender, 2–4 inches.

KEY CHARACTERS: Leaves mostly basal, slender, on 2 sides of stem. Stems not sticky. Flowers yellowish, in spike-like raceme. Fruit capsules.

HABITAT: Alpine tundra, heath, stony areas.



Tofieldia glutinosa
sticky false-asphodel

TOGL2
Liliaceae

HABIT: Stout, 6–12 inches.

KEY CHARACTERS: Leaves mostly basal, slender, on 2 sides of stem. Stems sticky. Flowers yellowish, in leafless to 1-bracted long-stemmed spike-like raceme. Fruit capsules.

HABITAT: Open forests, meadows, muskegs.



Trientalis europaea
starflower

TREU
Primulaceae

HABIT: Unbranched, upright, 2–6 inches.

KEY CHARACTERS: Leaves 5–6 in terminal whorl with much smaller, alternate stem leaves below. Flowers white, 1–3 per plant, solitary, terminal. Fruit capsules.

HABITAT: Forests, meadows, muskegs, open areas.



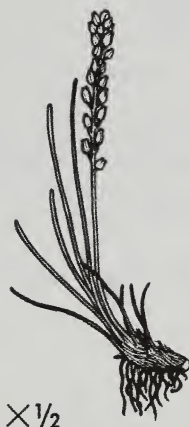
Triglochin maritimum
seaside arrowgrass

TRMA4
Juncaginaceae

HABIT: 5–35 inches.

KEY CHARACTERS: Leaves all basal, fleshy, linear, from thick woody rhizome. Inflorescence a several to many-flowered raceme. Flower segments greenish or yellowish.

HABITAT: Muskegs, saline meadows, tidal flats, open woods.



Utricularia vulgaris
common bladderwort

UTVU
Lentibulariaceae

HABIT: Free floating.

KEY CHARACTERS: Leaves much dissected, the leaf segments hair like. Leaves all with bladders. Flowers 5–15, yellow.

HABITAT: Ponds and lakes.



Valeriana sitchensis
Sitka valerian

VASI
Valerianaceae

HABIT: 1–3 feet.

KEY CHARACTERS: Leaves mostly on stem, opposite, toothed, with 3–5 leaflets. Flowers white or lilac, in dense terminal inflorescence. Fruit achenes.

HABITAT: Moist places, tundra.



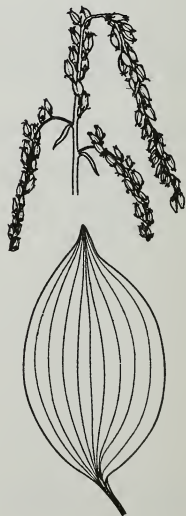
Veratrum viride
false hellebore

VEVI
Liliaceae

HABIT: 3–8 feet.

KEY CHARACTERS: Leaves alternate, broad, with parallel veins, woolly pubescent underneath. Flowers yellowish-green, in terminal inflorescence with long, hanging branches. Fruit 3-parted capsules.

HABITAT: Meadows, moist places, shores
in Prince William Sound.



Viola epipsila
marsh violet

VIEP
Violaceae

HABIT: 2–10 inches.

KEY CHARACTERS: Leaves basal, toothed, shiny, thin, with rounded tip. Flowers lilac, solitary, on long stem with pair of bracts, nodding, with short and thick spur. Fruit capsules.

HABITAT: Muskegs, steambanks, wet meadows, open areas.



× 1/2

Viola glabella
yellow violet

VIGL
Violaceae

HABIT: 2–12 inches.

KEY CHARACTERS: Basal leaves toothed, with pointed tip. Stem leaves opposite. Flowers yellow, solitary, nodding. Fruit capsules.

HABITAT: Moist forests, riverbanks.



× 1/2

Viola langsдорffii
Alaska violet

VILA6
Violaceae

HABIT: 2–10 inches.

KEY CHARACTERS: Leaves basal, toothed, with rounded tip. Flowers purple, solitary, on long stem with pair of bracts, nodding. Fruit capsules.

HABITAT: Steambanks, moist meadows, snowbeds.



GRAMINOIDS

SEDGES/CYPERACEAE

Stems triangular, 3-ranked (leaves on 3 sides of stem) and mostly solid. Fruit usually an achene, never a caryopsis. 1 bract below flowers. Anthers attached at base.

GRASSES/GRAMINEAE

Stems round or flattened, 2-ranked (leaves on 2 sides of stem), and hollow. Fruit usually a caryopsis. 2 bracts below flowers. Anthers attached centrally.

RUSHES/JUNCACEAE

Stems round and mostly solid, 3-ranked. Flowers usually have a well-developed perianth of six segments. Fruit capsular with numerous seeds. Petals and sepals present.

Agrostis aequivalvis
arctic bentgrass

AGAE
Gramineae

Refer to *Podagrostis aequivalis* in Hultén (1968).

HABIT: Perennial, rhizomatous, forming small tufts, to 30 inches.

KEY CHARACTERS: Inflorescence a 2–6 inch long, loose, open panicle. Spikelets with 1 flower. Lemmas shorter than glumes, awnless.

HABITAT: Bogs and lake margins.



Agrostis alaskana
Alaska bentgrass

AGAL2
Gramineae

HABIT: Perennial, shortly rhizomatous, forming small to large tufts, to 30 inches.

KEY CHARACTERS: Inflorescence a 1–6 inch long, narrow to open panicle. Spikelets with 1 flower. Lemmas shorter than glumes, awnless or awned.

HABITAT: Bogs, lake shores, sea beaches.



Arctagrostis latifolia
polargrass

ARLA2
Gramineae

HABIT: Perennial, rhizomatous, tufted or solitary, 1–5 feet.

KEY CHARACTERS: Few basal leaves. Inflorescence a 2- to 26-inch long purplish open or short-branched panicle. Spikelets with 1 flower. Lemmas finely hairy, longer than glumes, awnless.

HABITAT: Forests, meadows, gravel bars, tundra.



Arctophila fulva
pendant grass

ARFU2
Gramineae

HABIT: Perennial, rhizomatous, 8–30 inches tall.

KEY CHARACTERS: Panicle open, the branches recurved or drooping, 2–9 inches long. Spikelets with 1–7 flowers, glumes shorter than lemmas.

HABITAT: Lake and pond margins, stream banks.



Calamagrostis canadensis CACA4
bluejoint reedgrass Gramineae

HABIT: Rhizomatous, to 6 feet.

KEY CHARACTERS: Inflorescence a 2–9 inch long open panicle. Spikelets with 1 flower. Florets with hairs longer than lemmas. Lemmas distinctly to barely shorter than glumes, with straight or curved dorsal awn, the awn shorter to slightly longer than glumes. Glumes usually purplish.

HABITAT: Open forests, meadows, shrublands, open areas, beaches.



Calamagrostis nutkaënsis CANU
Pacific reedgrass Gramineae

HABIT: Rhizomatous, tufted, to 3 feet.

KEY CHARACTERS: Inflorescence a 4–8 inch long narrow greenish or purplish open panicle. Spikelets with 1 flower. Florets with hairs not more than half as long as lemmas. Lemmas shorter than glumes, with awn straight or bent at base.

HABITAT: Wet places along coast.



Carex anthoxanthea
arctic sedge

CAAN10
Cyperaceae

HABIT: Culms with bladeless sheaths at base, 2–5 inches tall, in rows from creeping, yellowish-brown rhizome.

KEY CHARACTERS: Solitary spike, smooth, fusiform perigynia, yellowish-green.

HABITAT: Grassy slopes.



Carex aquatilis
water sedge

CAAQ
Cyperaceae

HABIT: Height to 30 inches. Cordlike rhizome, coarse, scaly, and brown or reddish-brown.

KEY CHARACTERS: Leaves as long as stem, or slightly shorter. Stiff, erect spikes, the upper sessile, the lower short-stalked. Scales brown or blackish with a pale midvein. Light colored perigynia.

HABITAT: Shallow water, marshes, and along rivers.



Carex lyngbyaei
Lyngbye's sedge

CALY3
Cyperaceae

HABIT: Stoloniferous, tufted to 3 feet tall. Triangular, smooth culm, longer than leaves.

KEY CHARACTERS: Flat leaves, light green and abruptly pointed. Male spikes 2–3, female 2–4. Inflorescences drooping, long-stalked. Lanceolate scales, long-pointed, dark reddish-brown with a lighter center. Ovate perigynia.

HABITAT: Coastal salt marshes, rarely inland.



Carex macrochaeta
longawned sedge

CAMA11
Cyperaceae

HABIT: Loosely in tufts or dense clumps, with short runners to 3 feet tall. Culm longer than leaves, nearly smooth, with purplish-brown, bladeless sheaths, shredded at the base.

KEY CHARACTERS: Light green leaf blades. Oblong spikes 3–4, on thin, smooth stalks. Lanceolate scales with a light-colored midvein, excurrent into yellowish awn. Elliptic-lanceolate perigynia.

HABITAT: Wet places, common along coast, rarer inland.



Carex magellanica
boreal bog sedge

CAMA12
Cyperaceae

HABIT: Rhizomatous and more or less caespitose, 4–30 inches tall.

KEY CHARACTERS: Roots with yellowish woolly hairs. Leaves flat, pale green, shorter than the culm. Terminal spike mostly staminate, the lateral 2–4 pistillate on short, drooping stalks. Pistillate scales longer than the perigynia, lanceolate, coming to a long point.

HABITAT: Bogs, muskegs, lake shores.



Carex microchaeta
smallawned sedge

CAMI4
Cyperaceae

HABIT: Long, slender, fibrous rootstock. Culms with many basal leaves, 3–25 inches tall, the outer withered and brown.

KEY CHARACTERS: Leaves much shorter than culm. Spikes 2–4, in mature plants drooping. Acute scales, purplish-black with lighter midrib. Elliptic perigynia, blackish-tinged.

HABITAT: Meadows, wet places, heaths to over 6900 feet.



Carex microglochin
fewseeded bog sedge

CAMI6
Cyperaceae

HABIT: Rhizomatous, $2\frac{1}{2}$ –8 inches tall.

KEY CHARACTERS: Leaf sheaths brownish, lower leaf blades short, blades longer higher on culm. Spikes solitary, staminate flowers at tip. Pistillate scales shorter than the perigynia. Perigynia abruptly reflexed.

HABITAT: Marshy heath, lake shores, stream banks.



$\times \frac{2}{3}$

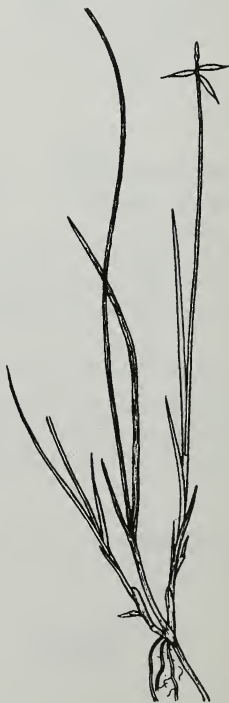
Carex pauciflora
fewflower sedge

CAPA19
Cyperaceae

HABIT: Loosely tufted with short, brown, scaly runners. Culm curved at base, 4–10 inches.

KEY CHARACTERS: Lowest sheath bladeless. Style projecting beyond the mouth of brownish-green perigynia.

HABITAT: Peat bogs, prefers acid soil.



Carex pluriflora
manyflower sedge

CAPL6
Cyperaceae

HABIT: Long, scaly, purplish-black rhizome, fuzzy roots. Triangular culm, 4–15 inches.

KEY CHARACTERS: Leaves about as long as culm, flat, grayish-green. Spikes 2–3, the terminal male, long-stalked, the lateral female, drooping on hairlike stalks, 10–20 flowered. Scales broadly ovate and pointed at the tip, black, with a paler mid-vein. Ovate to ovate-lanceolate perigynia, in age blackish-brown.

HABITAT: Bogs and margins of ponds along coast.



Carex sitchensis
Sitka sedge

CASI3
Cyperaceae

HABIT: Very coarse, short, scaly rhizome, brown or purplish. Culms sharply triangular and smooth, to 40 inches tall.

KEY CHARACTERS: Male spikes 2–5, slender, erect, female strongly separate, slightly drooping, on long, slender stalks. Scales brownish, with pale center, pointed in age, distinctly thin and translucent at tip. Oval perigynia.

HABITAT: Swamps.



Deschampsia caespitosa
tufted hairgrass

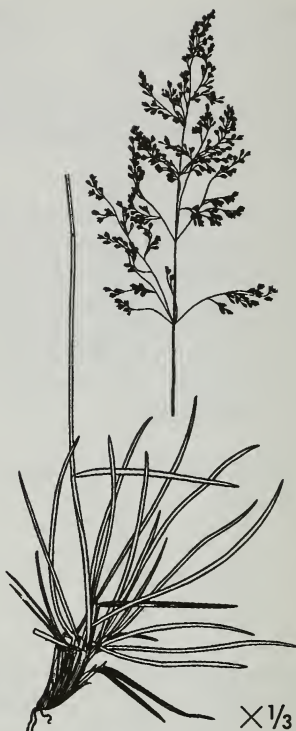
DECE
Gramineae

Includes *D. beringensis* as defined by
Hultén (1968).

HABIT: Tufted, up to and exceeding 3 feet
tall.

KEY CHARACTERS: Smooth leaves,
mostly flat. Open, branched flower cluster,
with hairlike, very scabrous branches. Awn
mostly fixed close to base, slightly longer
than floret. Fuzzy rachis. Flower cluster
typically yellowish-green, but many are
darker.

HABITAT: Muddy shores.



Eleocharis acicularis
needle spikerush

ELAC
Cyperaceae

HABIT: Caespitose with slender rhizomes
and stolons, to 4 inches tall.

KEY CHARACTERS: Leaves reduced to
sheaths (no leaf blades). Spikes solitary.

HABITAT: Mud banks along streams,
lakes, or ponds.



Eleocharis palustris
common spikerush

ELPA3
Cyperaceae

HABIT: Stiff culms, to 25 inches tall, with reddish basal sheaths from stout, brownish-black rhizome.

KEY CHARACTERS: Lanceolate to ovate spike, brown with two basal scales, each clasping half of the culm.

HABITAT: Wet places, shallow water.



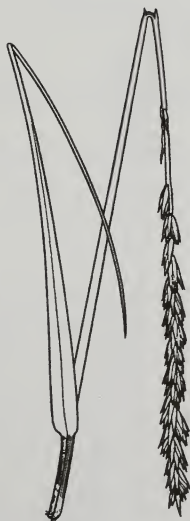
Elymus arenarius
beach rye

ELARM
Gramineae

HABIT: Culms from long, stout, creeping rootstocks.

KEY CHARACTERS: Old leaves at base persistent after withering. Leaves firm, flat, with edges rolled inward. Stiff spike, spikelets 3-7 flowered.

HABITAT: Sandy beaches, forming a belt along shore, rare on dunes inland.



Eriophorum angustifolium ERAN6
tall cottongrass Cyperaceae

HABIT: Rhizomatous, 4–35 inches.

KEY CHARACTERS: Leaves usually flat below the middle, triangular channeled or folded above the middle. Spikes 2–10, at least some pendulous, scales grayish. Flower heads with long, silky, white bristles.

HABITAT: Muskegs, bogs, meadows, shallow ponds, alpine tundra, heath, open woods.

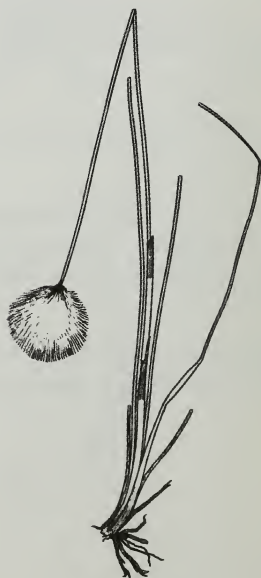


Eriophorum russeolum ERRU2
red cottongrass Cyperaceae

HABIT: Rhizomatous, 8–30 inches.

KEY CHARACTERS: Leaves linear, channeled. Spikes solitary, erect, more or less round. Flower heads with long, silky, cinnamon to white bristles.

HABITAT: Bogs, lakeshores, muskegs, wet meadows, stream banks, alpine tundra, heath, open woods.



Festuca altaica
rough fescue

FEAL
Gramineae

HABIT: Perennial, tufted, 8–32 inches.

KEY CHARACTERS: Leaf blades folded.
Inflorescence a 3–6 inch long open panicle.
Spikelets with 2–6 flowers. Lemmas pur-
plish to green, with short terminal awn.

HABITAT: Open forests, streambanks,
gravel bars, rock outcrops.



Festuca rubra
red fescue

FERU2
Gramineae

HABIT: Perennial, tufted, to 25 inches.

KEY CHARACTERS: Leaf blades folded
or rolled in from edges. Inflorescence a 1–
4 inch long compact or open panicle, often
to 1 side of stem. Spikelets purple to green,
with 4–7 flowers. Lemmas usually with
short terminal awn.

HABITAT: Muskegs, cliffs, beaches, tidal
flats.



Glyceria pauciflora
false mannagrass

GLPA6
Gramineae

HABIT: Rhizomatous, often rooting at the lower nodes, 10–40 inches tall.

KEY CHARACTERS: Leaf blades flat, to $\frac{3}{8}$ inches wide, rough-hairy on one or both sides. Panicle mostly 4–9 inches long, loose, branches ascending to spreading or drooping. Spikelets 3–7 flowered, lemmas with 5–7 prominent nerves.

HABITAT: Woods, thickets, marshes, meadows.



Hierochloë alpina
alpine holygrass

HIAL3
Gramineae

HABIT: Tufted, shortly rhizomatous, $\frac{1}{2}$ –1 foot.

KEY CHARACTERS: Leaf blades rolled under at edge. Inflorescence a 1– to 2-inch long open panicle. Spikelets with 3 flowers. Stamen-bearing lemmas hairy, the first with short awn, the second with long, twisted and bent awn arising from middle of lemma. Fertile lemmas hairy at tip, awnless. Glumes about as long as spikelet.

HABITAT: Open forests, tundra.



Hordeum brachyantherum HOBR2
meadow barley Gramineae

HABIT: Tufted, 6–33 inches tall.

KEY CHARACTERS: Leaf blades flat.
Inflorescence an erect spike 1½–5 inches
long, easily shattering when mature.
Glumes all slender, awnlike. Central floret
usually with an awn surpassing those of the
glumes.

HABITAT: Open woods, tidal flats, beach-
es, bluffs, disturbed areas.



Juncus alpinus JUAL
alpine rush Juncaceae

HABIT: Perennial from short rhizomes,
culms tufted, 4–18 inches tall.

KEY CHARACTERS: Leaves 1–3 per
stem. Leaf blades stiff, erect, round in
cross-section. Inflorescence terminal, the
branches ascending, heads commonly
5–many, 3–10 flowered.

HABITAT: Sandy banks and shores and
moist sites near lakes, streams, and ponds.



Juncus arcticus
arctic rush

JUAR2
Juncaceae

HABIT: Culms stout, thick, with yellowish-brown, shiny basal sheaths in rows from thick, horizontal, dark rootstocks.

KEY CHARACTERS: Contracted flower cluster, many-flowered, outer flower leaves linear-lanceolate, brown with greenish center, longer than inner.

HABITAT: Sandy shores, tidal marshes.

(subsp. *sitchensis*, subsp. *alaskanus* and subsp. *ater* similar, also found in wet places and river flats.)



Luzula multiflora
common woodrush

LUMU2
Juncaceae

HABIT: Tufted, to 18 inches.

KEY CHARACTERS: Leaves narrow, with closed sheaths. 2-4 stem leaves. Stem solid and round. Flowers crowded in a spike, with 3 petals and 3 sepals, all scale-like. Fruit 1-parted, 3-seeded capsules, longer or shorter than "petals and sepals."

HABITAT: Wet to dry forests and tundra.



Luzula parviflora LUPA4
smallflowered woodrush Juncaceae

HABIT: Tufted or solitary from rhizomes, 6–38 inches.

KEY CHARACTERS: Leaves broad, with closed sheaths. 3–5 stem leaves. Stem solid and round. Flowers solitary at tips of branches of open inflorescence, with 3 petals and 3 sepals, all scale-like. Fruit 1-parted, 3-seeded capsules, at least as long as “petals and sepals.”

HABITAT: Forests, meadows.



Luzula wahlenbergii LUWA
Wahlenberg's woodrush Juncaceae

HABIT: Tufted and shortly rhizomatous, 4–16 inches tall.

KEY CHARACTERS: Leaves blades flat. Inflorescence an open, nodding, or spreading panicle, the flowers solitary or in 2s or 3s at the end of hairlike branches.

HABITAT: Most sites in alpine tundra, heath, and open woods.



Phleum commutatum
mountain timothy

PHCO9
Gramineae

HABIT: Perennial, tufted, 5–26 inches.

KEY CHARACTERS: Inflorescence a $\frac{1}{2}$ –to 2-inch long, short-branched, dense, spike-like, cylindrical panicle. Spikelets with 1 flower. Lemmas finely hairy, awnless. Glumes with hairs on central ridge and sides, with awn up to $\frac{3}{4}$ length of glume.

HABITAT: Open forests, meadows, stream-banks.



Poa lanata
arctic bluegrass

POLA
Gramineae

HABIT: Perennial from creeping rhizomes, 8–30 inches tall.

KEY CHARACTERS: Leaves short, stiff. Panicle pyramid-shaped. Spikelets purplish, 3–6 flowered, lemmas densely hairy with woolly hairs in lower half.

HABITAT: Meadows.



Poa macrantha
seashore bluegrass

POMA26
Gramineae

Not in Hultén (1968). See Pojar and Mackinnon (1994).

HABIT: Perennial with extensively creeping rhizomes and long runners, upright, 5–15 inches tall.

KEY CHARACTERS: Leaves are stiff, inrolled, in dense tufts. Panicle compact, 1½–5 inches long. Spikelets 5-flowered, long (½ inches) relative to most species of *Poa*.

HABITAT: Coastal sand dunes.

Puccinellia nutkaensis
Nootka alkaligrass

PUNU
Gramineae

HABIT: Tufted perennial, 8–25 inches tall.

KEY CHARACTERS: Leaf blades flat to infolded. Panicles 1½–7½ inches long, the branches appressed-ascending to spreading. Spikelets mostly 4–6 flowered, green or purplish.

HABITAT: Seashores.



Puccinellia pumila
dwarf alkaligrass

PUPU
Gramineae

HABIT: Tufted perennial, 3–8 inches tall.

KEY CHARACTERS: Leaf blades infolded. Panicles 1–3 inches long, the branches usually appressed. Spikelets mostly 3–6 flowered, green or purplish.

HABITAT: Seashores.



Trichophorum caespitosum TRCA30
tufted bulrush Cyperaceae

HABIT: Perennial. Densely tufted. Smooth culms.

KEY CHARACTERS: Light green, erect or ascending. Numerous basal sheaths. Solitary spikelet, terminal, few-flowered and ovoid-oblong. Scales ovate and yellowish-brown, deciduous with 6 smooth bristles.

HABITAT: In acid bogs and on moist rocks in tundra, alpine mats.



Trisetum spicatum
spike trisetum

TRSP2
Gramineae

HABIT: Tufted, to 28 inches.

KEY CHARACTERS: Leaves densely hairy. Inflorescence a $\frac{1}{2}$ – to 5 inch long open spike-like panicle. Spikelets with 2 or more flowers. Lemmas extend beyond or concealed by glumes, with bent and twisted awn arising from above middle.

HABITAT: Forests, meadows, streambanks, rock outcrops, alpine.



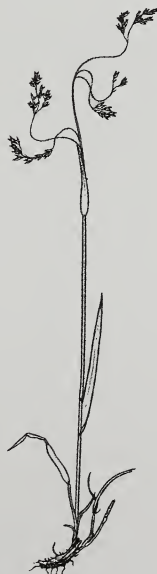
Vahlodea atropurpurea
mountain hairgrass

VAAT2
Gramineae

HABIT: Perennial, tufted, to 26 inches.

KEY CHARACTERS: Leaf blades flat and broad. Inflorescence a 1–5 inch long open panicle. Spikelets with 2 or more flowers, green becoming purplish. Florets with hairs $\frac{1}{2}$ as long as lemmas. Lemmas concealed by glumes, with twisted awn arising from above middle.

HABITAT: Open forests, meadows.



FERNS AND FERN ALLIES

Athyrium filix-femina
lady fern

ATFI
Athyriaceae

HABIT: Deciduous, tufted, to 2 feet.

KEY CHARACTERS: Blades oval, 2–3 times pinnate. Stalk short, with scales.

HABITAT: Lowlands to 3600 feet. Moist forests, streambanks.



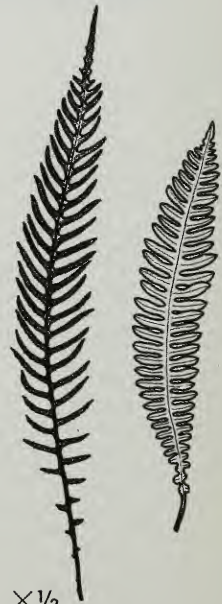
Blechnum spicant
deer fern

BLSP
Blechnaceae

HABIT: Evergreen, tufted, to 2 feet.

KEY CHARACTERS: Sterile blades narrowly oval, evergreen, leathery, with short stalk, forming circle around fertile blades. Fertile blades similar, but taller, deciduous, with narrower “leaflets” and longer stalk. Both types once pinnately divided.

HABITAT: Forests, streambanks, subalpine meadows, acid soil.



$\times \frac{1}{2}$

Cystopteris fragilis
fragile fern

CYFR2
Athyriaceae

HABIT: Deciduous, tufted, to 1 foot.

KEY CHARACTERS: Blades 2–3 times pinnate. Stalk shorter than blade.

HABITAT: To 6000 feet. Open forests, talus slopes, rock crevices.



Dryopteris dilatata
wood fern

DRDI2
Aspidiaceae

HABIT: Deciduous, tufted, 1–3 feet.

KEY CHARACTERS: Blade egg-shaped in outline, 3 times pinnate. Lower pair of leaflets triangular. Stalk shorter than blade, with scales.

HABITAT: Forests, streambanks.



Equisetum arvense
common horsetail

EQAR
Equisetaceae

HABIT: Upright, to 30 inches.

KEY CHARACTERS: Stem hollow, jointed, with 10–12 vertical ridges. Branches in whorls. Brown, branchless flowering stems appear in spring, fruiting head withers quickly.

HABITAT: Forests, lakeshores, disturbed areas, beaches, tundra.



Equisetum fluviatile
swamp horsetail

EQFL
Equisetaceae

HABIT: Rhizome glabrous, simple or branched stem, 10–40 inches tall, with wide central cavity.

KEY CHARACTERS: Stem finely striate, smooth to the touch. Single branches or in irregular whorls at internodes. Green sheaths, with dark brown teeth. Obtuse, long-stalked cones.

HABITAT: Shallow water and marshy places in low altitudes.



Equisetum palustre
marsh horsetail

EQPA
Equisetaceae

HABIT: Thin, smooth rhizome, lustrous, dark reddish-brown, stems 6–24 inches tall.

KEY CHARACTERS: Simple stem with 6 ridges, or with single to several thick branches of different lengths, top of stem usually lacking branches. First sheath of branches very short and dark brown, the next green. Long-stalked cone, obtuse and soon withering.

HABITAT: Wet or moist places, ponds. Rare along shores, more common inland.



Equisetum pratense
meadow horsetail

EQPR
Equisetaceae

HABIT: Rhizome nearly black, creeping, with scattered stems, 4–20 inches tall.

KEY CHARACTERS: Spring phase with light-brown stem and few short branches, later developing into whorls of branches. Summer phase with grayish-green, thin, striated, very rough stems. Green sheaths. Numerous slender branches, 3-angled. Obtuse, long-stalked cone, soon withering.

HABITAT: Common in woods of the interior.



Equisetum sylvaticum
woodland horsetail

EQSY
Equisetaceae

HABIT: Upright, to 28 inches.

KEY CHARACTERS: Stem hollow, jointed, with 10–18 vertical ridges. Branches in whorls, branches again branched. Brownish, branched flowering stems appear in spring, fruiting head withers quickly.

HABITAT: To subalpine. Open forests.



Equisetum variegatum
northern horsetail

EQVA
Equisetaceae

HABIT: Upright, to 15 inches.

KEY CHARACTERS: Stem hollow, jointed, with 5–12 vertical ridges, the central cavity to the diameter of the stem. Fruiting head with a prominent point at tip.

HABITAT: Muskegs, streambanks, woods, alpine tundra.



Gymnocarpium dryopteris GYDR
oak fern Aspidiaceae

HABIT: Deciduous, solitary, 8–12 inches.

KEY CHARACTERS: Blades light green, ternate, the leaflets again 1–2 times pinnate.

HABITAT: Forests, thickets, streambanks, seeps.



Lycopodium alpinum LYAL3
alpine clubmoss Lycopodiaceae

HABIT: Elongate stem creeping in surface of soil, rooting, whitish-green.

KEY CHARACTERS: Erect, blue-green branches, cylindrical or usually slightly flattened, with leaves in 4 rows. Sessile spikes, at tips of leafy branches.

HABITAT: Woods, meadows, and heaths. Common from lowlands to mountains. Absent from calcareous soil.



Lycopodium annotinum
stiff clubmoss

LYAN2
Lycopodiaceae

HABIT: Upright from creeping stem, to 8 inches.

KEY CHARACTERS: Leaves in 8 rows along stem, 4 in a whorl, needle-like, toothed, stiff, with pointed tip. 1 terminal stalkless spore-bearing spike per stem.

HABITAT: Lowlands to lower alpine. Forests, heaths, muskegs.



Lycopodium clavatum
running clubmoss

LYCL
Lycopodiaceae

HABIT: Ascending from creeping stem, to 8 inches.

KEY CHARACTERS: Leaves in 10 rows along stem, needle-like, lying flat on stem, or nearly so, with long hair at tip. 1 terminal fruiting stalk per stem with 1-3 spore-bearing spikes.

HABITAT: To lower alpine. Forests, rocky places, mostly on acid soil.



$\times \frac{1}{2}$

Lycopodium complanatum LYCO3
groundcedar Lycopodiaceae

HABIT: Upright from creeping stem, to 14 inches.

KEY CHARACTERS: Leaves in 4 rows, scale-like, lying flat on stem. Stems flat, with cedar-like appearance. 1 terminal fruiting stalk per branch with 2 spore-bearing spikes.

HABITAT: Rarely above treeline. Dry forests.



Lycopodium sabinifolium LYSAS3
savinleaf groundpine Lycopodiaceae

HABIT: Ascending, densely branching, stem creeping in surface soil, stems 1–5 inches long.

KEY CHARACTERS: Leaves in 5–6 rows along stem, uniform. Spikes solitary at ends of elongate branches.

HABITAT: Alpine meadows, heath, woods.



Lycopodium selago
fir clubmoss

LYSE
Lycopodiaceae

HABIT: Ascending, tufted, 2–5 inches.

KEY CHARACTERS: Leaves in 8 rows along stem, needle-like. Stems branch in pairs, with all branches reaching same height. Spore bearing leaves along stem, not in spikes.

HABITAT: Low elevation to alpine.
Forests, heaths, muskegs, tundra.



Selaginella selaginoides
club spikemoss

SESE
Selaginellaceae

HABIT: Stems of two types, the vegetative ones prostrate and mat-forming, the fertile ones ascending. Stems 1–4 inches long.

KEY CHARACTERS: Leaves spirally arranged, not bristle-tipped. Fruiting structure round in cross section, solitary.

HABITAT: Woods, thickets, heath.

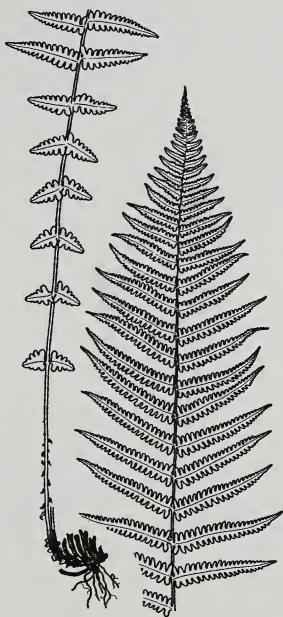


Thelypteris limbosperma THLI9
maiden fern Thelypteridaceae

HABIT: Short, ascending rhizome, scaly.

KEY CHARACTERS: Leaf stalks grooved above, with dark base. Fronds forming crown, yellowish-green, glandular and covered with white down on veins below, abruptly pointed. Pinnae segments entire, blunt. Sori small, indusium lobed, glandular.

HABITAT: Open, rocky slopes, reaching subalpine region.



Thelypteris phegopteris THPH
beech fern Thelypteridaceae

HABIT: Deciduous, solitary, to 16 inches.

KEY CHARACTERS: Blade triangular, 1–2 times pinnate, hairy. Stalk hairy, scaly, twice as long as blade. Lower most leaflets droop.

HABITAT: Lowlands to lower alpine. Forests, meadows, streambanks, stony slopes.



APPENDICES

Appendix 1.

Comparison between Hultén and PLANTS nomenclature.

Hultén Name	Code	PLANTS revised name	Code
Trees			
<i>Betula kenaica</i>	BEKE2	<i>Betula papyrifera</i> var. <i>kenaica</i>	BEPAK
<i>Betula papyrifera</i>	BEPA	<i>Betula neoalaskana</i>	BENE4
Shrubs			
<i>Alnus crispa</i> ssp. <i>sinuata</i>	ALCRS	<i>Alnus viridis</i> ssp. <i>sinuata</i>	ALVIS
<i>Cassiope stelleriana</i>	CAST33	<i>Harrimanella stelleriana</i>	HAST3
<i>Cladothamnus pyrolaeiflorus</i>	CLPY3	<i>Elliottia pyroliflorus</i>	ELPY
<i>Echinopanax horridum</i>	ECHO2	<i>Oplopanax horridus</i>	OPHO
<i>Ledum palustre</i>			
ssp. <i>groenlandicum</i>	LEPAG	<i>Ledum groenlandicum</i>	LEGR
<i>Oxycoccus microcarpus</i>	OXMI3	<i>Vaccinium oxycoccos</i>	VAOX
<i>Potentilla fruticosa</i>	POFR4	<i>Dasiphora floribunda</i>	DAFL3
<i>Salix arctica</i>	SAAR4	<i>Salix arctophila</i>	SAAR6
<i>Salix depressa</i> ssp. <i>rostrata</i>	SADER	<i>Salix bebbiana</i>	SABE2
<i>Spiraea beauverdiana</i>	SPBE	<i>Spiraea stevenii</i>	SPST3
<i>Vaccinium alaskensis</i>	VAAL	<i>Vaccinium ovalifolium</i>	VAOV
Forbs			
<i>Achillea borealis</i>	ACBO	<i>Achillea millefolium</i> var. <i>borealis</i>	ACMIB
<i>Apargidium boreale</i>	APBO	<i>Microseris borealis</i>	MIBO
<i>Aruncus sylvestris</i>	ARSYA	<i>Aruncus dioicus</i> var. <i>acuminatus</i>	ARDIA
<i>Callitriche verna</i>	CAVE2	<i>Callitriche palustris</i>	CAPA52
<i>Cardamine umbellata</i>	CAUM3	<i>Cardamine oligosperma</i> var. <i>kamtschatica</i>	CAOLK
<i>Cicuta mackenzieana</i>	CIMA	<i>Cicuta virosa</i>	CIVI5
<i>Conioselinum chinense</i>	COCHP	<i>Conioselinum gmelinii</i>	COGM
<i>Epilobium adenocaulon</i>	EPAD	<i>Epilobium ciliatum</i> ssp. <i>ciliatum</i>	EPCIC
<i>Epilobium angustifolium</i>	EPAN2	<i>Chamerion angustifolium</i> ssp. <i>angustifolium</i>	CHANA2
<i>Epilobium glandulosum</i>	EPGL4	<i>Epilobium ciliatum</i> ssp. <i>glandulosum</i>	EPCIG
<i>Epilobium latifolium</i>	EPLA	<i>Chamerion latifolium</i>	CHLA13
<i>Fauria crista-galli</i>	FACR	<i>Nephrophyllidium crista-galli</i>	NECR2
<i>Heracleum lanatum</i>	HELA4	<i>Heracleum maximum</i>	HEMA80
<i>Lathyrus maritimus</i>	LAMA3	<i>Lathyrus japonicus</i> var. <i>maritimus</i>	LAJAM
<i>Myosotis alpestris</i>	MYAL	<i>Myosotis asiatica</i>	MYAL
<i>Nuphar polysepala</i>	NUPO2	<i>Nuphar lutea</i> ssp. <i>polysepala</i>	NULUP
<i>Petasites hyperboreus</i>	PEHY5	<i>Petasites frigidus</i> var. <i>nivalis</i>	PEFRN

<i>Platanthera saccata</i>	PLSA6	<i>Platanthera stricta</i>	PLST4
<i>Potamogeton filiformis</i>	POFI2	<i>Stuckenia filiformis</i> ssp. <i>filiformis</i>	STFIF
<i>Potamogeton pectinatus</i>	POPE6	<i>Stuckenia pectinatus</i>	STPE12
<i>Potamogeton perfoliatus</i>	POPER5	<i>Potamogeton richardsonii</i>	PORI2
<i>Potentilla egedii</i>	POEG	<i>Argentina egedii</i> ssp. <i>egedii</i>	AREGE
<i>Potentilla palustris</i>	POPA14	<i>Comarum palustre</i>	COPA28
<i>Pyrola secunda</i>	PYSE	<i>Orthilia secunda</i>	ORSE
<i>Rumex fenestratus</i>	RUFE3	<i>Rumex aquaticus</i> var. <i>fenestratus</i>	RUAQF
<i>Sanguisorba stipulata</i>	SAST11	<i>Sanguisorba canadensis</i>	SACA14
<i>Saxifraga punctata</i>	SAPU6	<i>Saxifraga nelsoniana</i> ssp. <i>nelsoniana</i>	SANEN
<i>Sedum rosea</i>	SEROI3	<i>Rhodiola integrifolia</i> ssp. <i>integrifolia</i>	RHINI
<i>Sparganium minimum</i>	SPMI	<i>Sparganium natans</i>	SPNA
<i>Stellaria sitchana</i>	STSI3	<i>Stellaria borealis</i> ssp. <i>sitchana</i>	STBOS
<i>Utricularia vulgaris</i>	UTVU	<i>Utricularia macrorhiza</i>	UTMA
Graminoids			
<i>Agrostis alaskana</i>	AGAL2	<i>Agrostis exarata</i>	AGEX
<i>Carex sitchensis</i>	CASI3	<i>Carex aquatilis</i> var. <i>dives</i>	CAAQD
<i>Elymus arenarius</i>	ELARM	<i>Leymus mollis</i> ssp. <i>mollis</i>	LEMOM2
<i>Glyceria pauciflora</i>	GLPA6	<i>Torreyochloa pallida</i> var. <i>pauciflora</i>	TOPAP3
<i>Juncus alpinus</i>	JUAL	<i>Juncus alpinoarticulatus</i> ssp. <i>nodulosus</i>	JUALN
<i>Phleum commutatum</i>	PHCO9	<i>Phleum alpinum</i>	PHAL2
<i>Poa lanata</i>	POLA	<i>Poa arctica</i> ssp. <i>lanata</i>	POARL4
<i>Puccinellia pumila</i>	PUPU	<i>Puccinellia tenella</i> ssp. <i>alaskana</i>	PUTEA
Ferns and Fern Allies			
<i>Dryopteris dilatata</i>	DRDI2	<i>Dryopteris expansa</i>	DREX2
<i>Lycopodium sabinifolium</i>	LYSAS3	<i>Lycopodium sitchense</i>	LYSI
<i>Lycopodium selago</i>	LYSE	<i>Huperzia selago</i> var. <i>selago</i>	HUSES
<i>Thelypteris limbosperma</i>	THLI9	<i>Thelypteris quelpaertensis</i>	THQU2
<i>Thelypteris phegopteris</i>	THPH	<i>Phegopteris connectilis</i>	PHCO24

Appendix 2. Comparison among white, Lutz, and Sitka spruce.

<u>CHARACTER</u>	<u>WHITE SPRUCE</u>	<u>LUTZ SPRUCE</u>	<u>SITKA SPRUCE</u>
needles	blunt tipped 4-angled blue-green $\frac{1}{2}$ - $\frac{3}{4}$ inch long white lines on all sides mass on top near end of twig skunk-like odor	slightly 4-angled whitish upper surface	sharp pointed flattened, keeled dark green $\frac{1}{2}$ -1 inch long white bands on top
twigs	orange-brown slender skunk-like odor		light to dark brown stout
cones	nearly stalkless $1\frac{1}{4}$ - $2\frac{1}{2}$ inches long	intermediate or small	short-stalked 2-3 $\frac{1}{2}$ inches long
scales	shiny light brown straight toothless flexible relatively short	light brown toothed relatively short	light orange rounded toothed stiff relatively long
bark (inner)	white smells sweet		white w/ brown dots foul odor

Appendix 3. Comparison between western and mountain hemlock.

<u>CHARACTER</u>	<u>WESTERN HEMLOCK</u>	<u>MOUNTAIN HEMLOCK</u>
needles	<p>on 2 sides of twigs flattened on both sides</p> <p>straight round tip dark green 2 white bands underneath flexible</p>	<p>on all sides of twigs flattened above rounded or angled underneath curved blunt tip blue-green white lines on both sides stout</p>
twigs	dark reddish-brown	light reddish-brown
cones	<p>$\frac{3}{8}$–1 inch long elliptic brown</p>	<p>1–3 inches long cylindrical purplish, turning brown</p>
bark (outer)	reddish-brown to gray-brown	gray to dark-brown

Appendix 4.

Comparison among stink, trailing black, northern black, and northern red currant.

<u>CHARACTER</u>	<u>STINK</u>	<u>TRAILING BLACK</u>	<u>NORTHERN BLACK</u>	<u>NORTHERN RED</u>
habit	ascending to upright	decumb., vine-like, upright	upright	prostrate to upright
leaf lobes	5-7, acute	5, triangular	3-5, rounded	3-5, triangular
flowers:				
number	15-50/raceme	6-20/raceme	5-12/raceme	6-20/raceme
racemes	3-12 inches	4-6 inches	1-2½ inches	2-4 inches
petals	white, purple, or greenish	red to purplish	white	purple
sepals	hairy	hairy on back	white pubescent	hairless
ovary	hairy, with not-stalked glands	pubescent, with stalked glands	with stalkless yellow glands	with no hairs or glands
fruit	black with bloom with stalkless glands	purplish-black with bloom with stalked glands	black with bloom with stalkless yellow glands	bright red and translucent with no hairs or glands
fetid odor	entire plant	crushed berries	crushed leaves and berries	no odor

Appendix 5. Comparison between Alaska and early blueberry.

<u>CHARACTER</u>	<u>ALASKA BLUEBERRY</u>	<u>EARLY BLUEBERRY</u>
leaves	few short glandular hairs on midvein underneath toothless or toothed up to entire length uniform size	hairless toothless or toothed up to bottom $\frac{1}{2}$ largest at tips of twigs
flowers	broader than long bronzy-pink to white appear after leaves half developed styles longer than petals	longer than broad pink appear before or with leaves styles shorter than petals
fruit	blue-black without bloom stalk straight, often longer than $\frac{3}{4}$ inch somewhat enlarged below fruit	bluish or blue-black with whitish bloom stalk curved, usually shorter than $\frac{3}{4}$ inches not enlarged below fruit

Appendix 6. Glossary.

ACHENE – a small, dry, hard, one-seeded fruit.

ALTERNATE – describes the arrangement of leaves on a stem, one per node, with leaves alternating on either side of the stem.

ANTHER – the portion of the stamen that contains the pollen.

ASCENDING – curving upward.

AWN – slender, generally terminal bristle.

AXIL – the upper angle formed between the axis and an organ that arises from it.

BASAL – at or pertaining to the base.

BEAK – a prominent elongate tip.

BIENNIAL – living for two growing seasons.

BLADE – the expanded part of a leaf.

BLOOM – a whitish, waxy, powdery covering.

BRACT – a small leaf from the base of which a flower or a floral axis arises; also a small leaf just below the flower or flower cluster.

BRISTLE – a stiff hair.

CAESPITOSE – growing in dense, low tufts.

CAPSULE – a dry fruit that splits open at maturity. Made of more than one carpel.

CARYOPSIS – in grasses, an achene-like fruit in which the pericarp is fused to the seed.

CATKIN – a scaly spike bearing apetalous, unisexual flower.

COMPOUND LEAF – a leaf divided into two or more parts or leaflets.

COROLLA – the petals of a flower, collectively.

CULM – the type of hollow or pithy slender stem found in grasses or sedges.

CYME – a flat topped or convex flower cluster, with central flowers opening first.

DECIDUOUS – falling after completion of the normal function; not persistent.

DECUMBENT – lying flat but tending to curve upward at the end.

DIVISION – segments of a leaf separated by a notch cut almost but not all the way to the base or midvein.

DRUPE – a fleshy one-seeded fruit with the seed enclosed in a hard shell, such as a plum.

ENTIRE – pertaining to margins, not toothed or otherwise cut.

EVERGREEN – remaining green throughout the year, not deciduous.

EXCURRENT – projecting beyond the edge of.

FLORET – in grasses, the flower parts with the subtending bracts (lemma and palea).

FOLLICLE – a dry fruit that splits open along one seam.

FROND – a leaf, especially of a fern.

GLABROUS – smooth, devoid of pubescence or hair in any form.

GLAND – a secreting surface or structure; an appendage having the general appearance of such an organ.

GLUME – one of the two bracts found at the base of a grass spikelet.

HEAD – a dense spherical or flat-topped inflorescence of stalkless flowers clustered on a common receptacle.

HIP – the fleshy fruit of the rose.

HYBRID – a plant whose parent plants are two different species or subspecies.

INFLORESCENCE – a cluster of flowers.

KEEL – a central dorsal ridge.

LEAFLET – a single division of a compound leaf.

LEMMA – the outer of the two bracts subtending the individual flowers in grass spikelets.

LIGULE – the showy part of the outer ring of flowers of the Composite Family

(Compositae).

LOBED – bearing lobes; loosely used, but usually cut in not over halfway to the base or mid-vein.

LYRE-SHAPED – pinnatifid, with the terminal lobe considerably larger than the others.

NEEDLE – a modified leaf that is long, slender, rather rigid and more or less sharp at the apex.

NODE – the place on the stem where leaves or branches normally originate.

OPPOSITE – situated directly across from each other at the same node.

OVARY – the seed-bearing part of the flower.

PALEA – the inner of the two bracts subtending the individual flowers in grass spikelets.

PALMATE – hand shaped, resembling the open, spread hand. The lobes or divisions attached at the base.

PANICLE – a branched inflorescence with the youngest flowers borne near the tip.

PEDUNCLE – a flower-stalk supporting a cluster of flowers, or a single flower when the pedicel is very long.

PERENNIAL – living for more than two years.

PERIANTH – the floral envelope consisting of sepals and petals.

PERICARP – the wall of the fruit, or seed-vessel.

PERIGYNIA – the pistil and surrounding bract of sedges.

PERIGYNIUM – the inflated saclike organ, or utricle, surrounding the pistil in *carex*.

PETALS – usually, the colorful part of the flower above the sepals.

PETIOLE – the leaf stalk.

PINNATE – leaflets arranged along each side of a common stem of a compound leaf.

PISTIL – the seed-bearing organ of a flower, consisting when complete of an ovary, style, and stigma.

PRICKLE – a small, sharp, slender growth.

PROSTRATE – lying flat on the ground.

RACEME – an inflorescence with a central stem and stalked flowers, the youngest flowers at the tip.

RACHIS – axis of a compound leaf, or a spike or raceme.

RHIZOME – a prostrate elongated underground stem.

ROSETTE – a cluster of spreading or radiating basal leaves.

SCABROUS – rough to the touch.

SACCATE – bag-shaped; pouchy

SCALE – any thin, dry, membranaceous structure.

SEPAL – one of the parts of the outer whorl of the flower, usually resembling a small green leaf, but may be similar in appearance to the petals.

SESSILE – without a stalk.

SHEATH – the part of the leaf that envelops the stem.

SILIQUE – a narrow, many-seeded capsule, usually more than 4 times as long as broad.

SOLITARY – one per stalk.

SPIKE – an inflorescence with a central stem and stalkless flowers.

SPIKELET – in grasses, the basic unit of the inflorescence in which the floret(s) are found at least partially covered by the two basal bracts (glumes).

SPINE – a sharp woody or rigid growth.

SPORANGIA – a structure within which spores are produced.

SPREADING – with nearly prostrate stems or branches.

SPUR – a tubular or sac-like projection from a blossom as of a petal or sepal; it usually contains a nectar-secreting gland.

STAMEN – the pollen-bearing organ of the flower.

STOLON – a trailing shoot above ground, rooting at the nodes, also called a runner.

STYLE – a prolongation of the ovary commonly bearing the stigma.

TERMINAL – arising from the end of the stem.

TERNATE – with 3 leaflets.

UMBEL – an inflorescence, more or less flattopped, in which all of the pedicels arise from the same point, like the ribs of an umbrella.

WHORL – an arrangement of three or more leaves at one node on the stem.

Appendix 7. Common names index

TREES

Alaska yellow cedar	<i>Chamaecyparis nootkatensis</i>	3
balsam poplar	<i>Populus balsamifera</i> subsp. <i>balsamifera</i>	7
black cottonwood	<i>Populus balsamifera</i> subsp. <i>trichocarpa</i>	8
black spruce	<i>Picea mariana</i>	6
Kenai birch	<i>Betula kenaica</i>	4
Lutz spruce	<i>Picea X lutzii</i>	6
mountain hemlock	<i>Tsuga mertensiana</i>	10
paper birch	<i>Betula papyrifera</i>	4
quaking aspen	<i>Populus tremuloides</i>	8
Scouler willow	<i>Salix scouleriana</i>	9
Sitka spruce	<i>Picea sitchensis</i>	7
western hemlock	<i>Tsuga heterophylla</i>	9
white spruce	<i>Picea glauca</i>	5

SHRUBS

Alaska blueberry	<i>Vaccinium alaskensis</i>	13
Aleutian mountain heath	<i>Phyllodoce aleutica</i>	40
alpine azalea	<i>Loiseleuria procumbens</i>	26
alpine bearberry	<i>Arctostaphylos alpina</i>	23
arctic willow	<i>Salix arctica</i>	15
Barclay willow	<i>Salix barclayi</i>	32
Beauverd spiraea	<i>Spiraea beauverdiana</i>	32
Bebb willow	<i>Salix depressa</i> subsp. <i>rostrata</i>	39
bog blueberry	<i>Vaccinium uliginosum</i>	33
bog cranberry	<i>Oxycoccus microcarpus</i>	41
bog rosemary	<i>Andromeda polifolia</i>	25
bristly black currant	<i>Ribes lacustre</i>	14
buffaloberry	<i>Shepherdia canadensis</i>	28
common juniper	<i>Juniperus communis</i>	37
copperbush	<i>Cladothamnus pyrolaeiflorus</i>	21
creeping sibbaldia	<i>Sibbaldia procumbens</i>	18
crowberry	<i>Empetrum nigrum</i>	38
devil's club	<i>Echinopanax horridum</i>	20
diapensia	<i>Diapensia lapponica</i>	20
dwarf birches	<i>Betula glandulosa/nana</i>	19
dwarf blueberry	<i>Vaccinium caespitosum</i>	16
early blueberry	<i>Vaccinium ovalifolium</i>	40
elderberry	<i>Sambucus racemosa</i>	41
feltleaf willow	<i>Salix alaxensis</i>	37
		31

four-angled cassiope	<i>Cassiope tetragona</i>	18
Greenland Labrador-tea	<i>Ledum palustre</i> subsp. <i>groenlandicum</i>	22
highbush cranberry	<i>Viburnum edule</i>	42
Hooker willow	<i>Salix hookeriana</i>	34
kinnikinnick	<i>Arctostaphylos uva-ursi</i>	16
least willow	<i>Salix rotundifolia</i>	36
low blueberry willow	<i>Salix myrtillofolia</i>	34
lowbush cranberry	<i>Vaccinium vitis-idaea</i>	42
luetkea	<i>Luetkea pectinata</i>	23
Mertens cassiope	<i>Cassiope mertensiana</i>	17
narrow-leaf Labrador-tea	<i>Ledum palustre</i> subsp. <i>decumbens</i>	21
netleaf willow	<i>Salix reticulata</i>	35
northern black currant	<i>Ribes hudsonianum</i>	28
northern red currant	<i>Ribes triste</i>	29
Oregon crab apple	<i>Malus fusca</i>	24
prickly rose	<i>Rosa acicularis</i>	30
raspberry	<i>Rubus idaeus</i>	30
red bearberry	<i>Arctostaphylos rubra</i>	15
rusty menziesia	<i>Menziesia ferruginea</i>	24
salmonberry	<i>Rubus spectabilis</i>	31
serviceberry	<i>Amelanchier</i> spp.	14
shrubby cinquefoil	<i>Potentilla fruticosa</i>	26
Sitka alder	<i>Alnus crispa</i> subsp. <i>sinuata</i>	13
Sitka mountain-ash	<i>Sorbus sitchensis</i>	39
Sitka willow	<i>Salix sitchensis</i>	36
skunk currant	<i>Ribes glandulosum</i>	27
Steller's cassiope	<i>Cassiope stelleriana</i>	17
stink currant	<i>Ribes bracteosum</i>	27
sweetgale	<i>Myrica gale</i>	25
tealeaf willow	<i>Salix pulchra</i>	35
thinleaf alder	<i>Alnus incana</i> subsp. <i>tenuifolia</i>	13
trailing black currant	<i>Ribes laxiflorum</i>	29
twinflower	<i>Linnaea borealis</i>	22
undergreen willow	<i>Salix commutata</i>	33
western mountain-ash	<i>Sorbus scopulina</i>	38
white mountain-avens	<i>Dryas octopetala</i>	19

Alaska Indian paintbrush	<i>Castilleja unalaschcensis</i>	56
Alaska violet	<i>Viola langsдорffii</i>	120
Aleutian mugwort	<i>Artemisia tilesii</i>	51
alpine bistort	<i>Polygonum viviparum</i>	94
alpine heuchera	<i>Heuchera glabra</i>	74
alpine sweetvetch	<i>Hedysarum alpinum</i>	73
alpine willow herb	<i>Epilobium anagalladifolium</i>	62
apargidium	<i>Apargidium boreale</i>	49
arctic stitchwort	<i>Minuartia arctica</i>	83
arctic sweet coltsfoot	<i>Petasites hyperboreus</i>	91
arrowleaf groundsel	<i>Senecio triangularis</i>	108
awlwort	<i>Subularia aquatica</i>	113
baneberry	<i>Actaea rubra</i>	46
beach pea	<i>Lathyrus maritimus</i>	77
beach lovage	<i>Ligusticum scoticum</i>	78
beach strawberry	<i>Fragaria chiloensis</i>	67
bent-leaved angelica	<i>Angelica genuflexa</i>	47
blackish oxytropes	<i>Oxytropis nigrescens</i>	87
bluebells of Scotland	<i>Campanula rotundifolia</i>	55
blunt-fruit sweet-cicely	<i>Osmorhiza depauperata</i>	86
boreal bog orchid	<i>Platanthera dilatata</i>	93
boreal sagebrush	<i>Artemisia arctica</i>	51
broadleaf arnica	<i>Arnica latifolia</i>	50
buckbean	<i>Menyanthes trifoliata</i>	82
bunchberry	<i>Cornus canadensis</i>	60
calthaleaf avens	<i>Geum calthifolium</i>	72
capitate lousewort	<i>Pedicularis capitata</i>	88
chiming bells	<i>Mertensia paniculata</i>	83
chocolate lily	<i>Fritillaria camschatcensis</i>	67
claspingleaf pondweed	<i>Potamogeton perfoliatus</i>	96
cloudberry	<i>Rubus chamaemorus</i>	104
common alplily	<i>Lloydia serotina</i>	80
common bladderwort	<i>Utricularia vulgaris</i>	117
common butterwort	<i>Pinguicula vulgaris</i>	92
common marestalk	<i>Hippuris vulgaris</i>	75
cow parsnip	<i>Heracleum lanatum</i>	73
curled starwort	<i>Stellaria crispa</i>	112
deerberry	<i>Maianthemum dilatatum</i>	82
deer cabbage	<i>Fauria crista-galli</i>	66
dwarf fireweed	<i>Epilobium latifolium</i>	64
enchanter's nightshade	<i>Circaea alpina</i>	57

false hellebore	<i>Veratrum viride</i>	118
fern leaf goldenthread	<i>Coptis aspleniifolia</i>	59
fewflower meadowrue	<i>Thalictrum sparsiflorum</i>	114
fiveleaf bramble	<i>Rubus pedatus</i>	104
fleshy starwort	<i>Stellaria crassifolia</i>	111
floating burreed	<i>Sparganium angustifolium</i>	109
floating pondweed	<i>Potamogeton natans</i>	95
foamflower	<i>Tiarella trifoliata</i>	115
forget-me-not	<i>Myosotis alpestris</i>	85
fourleaf marestail	<i>Hippuris tetraphylla</i>	75
fragrant bedstraw	<i>Galium triflorum</i>	69
fringed willow herb	<i>Epilobium glandulosum</i>	63
goatsbeard	<i>Aruncus sylvestris</i>	52
goosetongue plantain	<i>Plantago maritima</i>	92
greenish wintergreen	<i>Pyrola chlorantha</i>	99
ground-cone	<i>Boschniakia rossica</i>	52
grove sandwort	<i>Moehringia lateriflora</i>	84
heart-leaf twayblade	<i>Listera cordata</i>	79
heart-leaved saxifrage	<i>Saxifraga punctata</i>	106
hooded ladies' tresses	<i>Spiranthes romanoffiana</i>	110
Hornemann's willow herb	<i>Epilobium hornemannii</i>	64
Labrador lousewort	<i>Pedicularis labradorica</i>	89
largeflowered wintergreen	<i>Pyrola grandiflora</i>	100
large-leaf avens	<i>Geum macrophyllum</i>	72
Langsdorf's lousewort	<i>Pedicularis langsdorfii</i>	90
larkspur	<i>Delphinium glaucum</i>	61
little western bittercress	<i>Cardamine umbellata</i>	55
liverleaf wintergreen	<i>Pyrola asarifolia</i>	99
lyreleaved rockcress	<i>Arabis lyrata</i>	50
longbract frog orchid	<i>Coeloglossum viride</i>	58
Mackenzie's water hemlock	<i>Cicuta mackenzieana</i>	57
marsh fivefinger	<i>Potentilla palustris</i>	97
marsh violet	<i>Viola epipsila</i>	119
monkshood	<i>Aconitum delphinifolium</i>	45
mountain harebell	<i>Campanula lasiocarpa</i>	54
nagoonberry	<i>Rubus arcticus</i>	103
narcissus anemone	<i>Anemone narcissiflora</i>	46
Nootka lupine	<i>Lupinus nootkatensis</i>	80
northern asphodel	<i>Tofieldia coccinea</i>	115
northern bedstraw	<i>Galium boreale</i>	68
northern burreed	<i>Sparganium hyperboreum</i>	109
northern comandra	<i>Geocaulon lividum</i>	71
northern geranium	<i>Geranium erianthum</i>	71

northern goldenrod	<i>Solidago multiradiata</i>	108
northern grass-of-parnassas	<i>Parnassia palustris</i>	88
northern starwort	<i>Stellaria calycantha</i>	111
northern twayblade	<i>Listera borealis</i>	78
northern waterstarwort	<i>Callitriche hermaphroditica</i>	53
northern willow herb	<i>Epilobium adenocaulon</i>	62
one-sided wintergreen	<i>Pyrola secunda</i>	101
Pacific silverweed	<i>Potentilla egedii</i>	97
pale gentian	<i>Gentiana glauca</i>	70
pretty shooting star	<i>Dodecatheon pulchellum</i>	61
prickly saxifrage	<i>Saxifraga tricuspidata</i>	107
pygmy pussytoes	<i>Antennaria monocephala</i>	48
rattlesnake root	<i>Prenanthes alata</i>	98
roseroot stonecrop	<i>Sedum rosea</i>	107
round-leaf sundew	<i>Drosera rotundifolia</i>	61
sago pondweed	<i>Potamogeton pectinatus</i>	96
seacoast angelica	<i>Angelica lucida</i>	48
seaside arrowgrass	<i>Triglochin maritimum</i>	117
seaside buttercup	<i>Ranunculus cymbalaria</i>	101
seaside sandplant	<i>Honckenya peploides</i>	76
shortspike watermilfoil	<i>Myriophyllum sibiricum</i>	85
single delight	<i>Moneses uniflora</i>	84
Sitka burnet	<i>Sanguisorba stipulata</i>	105
Sitka starwort	<i>Stellaria sitchana</i>	112
Sitka sweet-cicely	<i>Osmorhiza purpurea</i>	87
Sitka valerian	<i>Valeriana sitchensis</i>	118
skunk cabbage	<i>Lysichiton americanum</i>	81
slender bog orchid	<i>Platanthera saccata</i>	93
slenderfruit willow herb	<i>Epilobium leptocarpum</i>	65
slender-leaved pondweed	<i>Potamogeton filiformis</i>	95
small burreed	<i>Sparganium minimum</i>	110
smallflower lousewort	<i>Pedicularis parviflora</i>	90
snowline wintergreen	<i>Pyrola minor</i>	100
spring waterstarwort	<i>Callitriche verna</i>	53
spotted gentian	<i>Gentiana platypetala</i>	70
starflower	<i>Trientalis europaea</i>	116
star gentian	<i>Swertia perennis</i>	114
sticky false-asphodel	<i>Tofieldia glutinosa</i>	116
subalpine fleabane	<i>Erigeron peregrinus</i>	66
swamp gentian	<i>Gentiana douglasiana</i>	69
swamp willow herb	<i>Epilobium palustre</i>	65
tall Jacob's-ladder	<i>Polemonium acutiflorum</i>	94
tall fireweed	<i>Epilobium angustifolium</i>	63

threepetal bedstraw	<i>Galium trifidum</i>	68
trifoliate goldentthread	<i>Coptis trifolia</i>	60
tufted loosestrife	<i>Lysimachia thyrsiflora</i>	81
twisted stalk	<i>Streptopus amplexifolius</i>	113
western columbine	<i>Aquilegia formosa</i>	49
yarrow	<i>Achillea borealis</i>	45
yellow anemone	<i>Anemone richardsonii</i>	47
yellowdot saxifrage	<i>Saxifraga bronchialis</i>	106
yellow marsh-marigold	<i>Caltha palustris</i>	54
yellow pondlily	<i>Nuphar polysepala</i>	86
yellow rattle	<i>Rhinanthus minor</i>	103
yellow violet	<i>Viola glabella</i>	119
wedgeleaf primrose	<i>Primula cuneifolia</i>	98
western buttercup	<i>Ranunculus occidentalis</i>	102
western dock	<i>Rumex fenestratus</i>	105
western hemlock-parsley	<i>Conioselinum chinense</i>	59
western twayblade	<i>Listera caurina</i>	79
western water hemlock	<i>Cicuta douglasii</i>	56
white water crowfoot	<i>Ranunculus trichophyllus</i>	102
whorled lousewort	<i>Pedicularis verticillata</i>	91
wild iris	<i>Iris setosa</i>	76
woolly hawkweed	<i>Hieracium triste</i>	74
woolly lousewort	<i>Pedicularis kanai</i>	89
vetchling	<i>Lathyrus palustris</i>	77

GRAMINOIDS 121

Alaska bentgrass	<i>Agrostis alaskana</i>	124
alpine holygrass	<i>Hierochloë alpina</i>	136
alpine rush	<i>Juncus alpinus</i>	137
arctic bluegrass	<i>Poa lanata</i>	140
arctic bentgrass	<i>Agrostis aequivalvis</i>	124
arctic rush	<i>Juncus arcticus</i>	138
arctic sedge	<i>Carex anthoxanthea</i>	127
beach rye	<i>Elymus arenarius</i>	133
bluejoint reedgrass	<i>Calamagrostis canadensis</i>	126
boreal bog sedge	<i>Carex magellanica</i>	129
common spikerush	<i>Eleocharis palustris</i>	133
common woodrush	<i>Luzula multiflora</i>	138
dwarf alkaligrass	<i>Puccinellia pumila</i>	142
false mannagrass	<i>Glyceria pauciflora</i>	136
fewflower sedge	<i>Carex pauciflora</i>	130
fewseeded bog sedge	<i>Carex microglochin</i>	130
longawned sedge	<i>Carex macrochaeta</i>	128

Lyngbye's sedge	<i>Carex lyngbyaei</i>	128
manyflower sedge	<i>Carex pluriflora</i>	131
meadow barley	<i>Hordeum brachyantherum</i>	137
mountain hairgrass	<i>Vahlodea atropurpurea</i>	143
mountain timothy	<i>Phleum commutatum</i>	140
needle spikerush	<i>Eleocharis acicularis</i>	132
Nootka alkaligrass	<i>Puccinellia nutkaensis</i>	141
Pacific reedgrass	<i>Calamagrostis nutkaënsis</i>	126
pendant grass	<i>Arctophila fulva</i>	125
polargrass	<i>Arctagrostis latifolia</i>	125
red cottongrass	<i>Eriophorum russeolum</i>	134
red fescue	<i>Festuca rubra</i>	135
rough fescue	<i>Festuca altaica</i>	135
seashore bluegrass	<i>Poa macrantha</i>	141
Sitka sedge	<i>Carex sitchensis</i>	131
smallflowered woodrush	<i>Luzula parviflora</i>	139
smallawned sedge	<i>Carex microchaeta</i>	129
spike trisetum	<i>Trisetum spicatum</i>	143
tall cottongrass	<i>Eriophorum angustifolium</i>	134
tufted bulrush	<i>Trichophorum caespitosum</i>	142
tufted hairgrass	<i>Deschampsia caespitosa</i>	132
Wahlenberg's woodrush	<i>Luzula wahlenbergii</i>	139
water sedge	<i>Carex aquatilis</i>	127

FERNS AND FERN ALLIES

		145
alpine clubmoss	<i>Lycopodium alpinum</i>	151
beech fern	<i>Thelypteris phegopteris</i>	155
club spikemoss	<i>Selaginella selaginoides</i>	154
common horsetail	<i>Equisetum arvense</i>	148
deer fern	<i>Blechnum spicant</i>	146
fir clubmoss	<i>Lycopodium selago</i>	154
fragile fern	<i>Cystopteris fragilis</i>	147
groundcedar	<i>Lycopodium complanatum</i>	153
lady fern	<i>Athyrium filix-femina</i>	146
maiden fern	<i>Thelypteris limbosperma</i>	155
marsh horsetail	<i>Equisetum palustre</i>	149
meadow horsetail	<i>Equisetum pratense</i>	149
northern horsetail	<i>Equisetum variegatum</i>	150
oak fern	<i>Gymnocarpium dryopteris</i>	151
running clubmoss	<i>Lycopodium clavatum</i>	152
savin groundpine	<i>Lycopodium sabinifolium</i>	153
stiff clubmoss	<i>Lycopodium annotinum</i>	152
swamp horsetail	<i>Equisetum fluviatile</i>	148

wood fern
woodland horsetail

Dryopteris dilatata
Equisetum sylvaticum

147
150

Appendix 8. Suggested reading.

I. Southcentral and Southeast Alaska Plant Community Guides:

Boggs, K. 2000. Classification of community types, successional sequences, and landscapes of the Copper River Delta, Alaska. General Technical Report PNW-469, USDA Forest Service, Pacific Northwest Research Station, Portland, OR. 244 p.

DeMeo, T., J. Martin, and R.A. West. 1992. Forest plant association management guide, Ketchikan Area, Tongass National Forest. Alaska Region publication R10-MB-210, USDA Forest Service, Juneau, AK. 405 p.

DeVelice, R.L., C.J. Hubbard, K. Boggs, S. Boudreau, M. Potkin, T. Boucher, and C. Wertheim. 1999. Plant community types of the Chugach National Forest: southcentral Alaska. Alaska Region Technical Publication R10-TP-76, USDA Forest Service, Chugach National Forest, Anchorage, AK. 375 pp.

Martin, J.R., S.J. Trull, W.W. Brady, R.A. West, and J.M. Downs. 1995. Forest plant association management guide, Chatham Area, Tongass National Forest. Alaska Region Technical Publication R10-TP-57. USDA Forest Service, Juneau, AK.

Pawuk, W.H. and E. Kissinger. 1988. Preliminary forest plant associations of the Stikine Area, Tongass National Forest. Alaska Region Technical Publication R10-TP-72. USDA Forest Service, Juneau, AK. 126 p.

Shephard, M.E. 1995. Plant community ecology and classification of the Yakutat foreland, Alaska. Alaska Region Technical Publication R10-TP-56. USDA Forest Service, Juneau, AK. 214 p. (plus appendices)

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Borchers, S.L. and C. Wertheim. 1992. Forest plant identification guide: Chugach National Forest. Alaska Region publication R10-MB-189, USDA Forest Service, Juneau, AK. 124 p.

Hultén, E. 1968. Flora of Alaska and neighboring territories: A manual of the vascular plants. Stanford University Press, Stanford, CA. 1008 p.

LaBounty, K. and J.R. Martin. 1987. Plant identification guide for forested sites of the Tongass National Forest. USDA Forest Service, Tongass National Forest, Sitka, AK. 71 p.

II. Plant Books, continued:

Pojar, J. and A. MacKinnon. 1994. Plants of the Pacific Northwest coast: Washington, Oregon, British Columbia & Alaska. Lone Pine Publishing, Vancouver, British Columbia. 527 p.

Robuck, O. Wayne. 1985. The common plants of the muskegs of southeast Alaska. Pacific Northwest Research Station Miscellaneous Publication. USDA Forest Service, Portland, OR. 131 p.

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Viereck, L.A. and E.L. Little, Jr. 1972. Alaska trees and shrubs. USDA Forest Service, Agriculture Handbook No. 410. Washington, D.C. 265 p.

Vitt, D.H., J.E. Marsh, and R.B. Bovey. 1988. A photographic field guide to the mosses, lichens, and ferns of northwest North America. Lone Pine Publishing, Edmonton, Alberta. 296 p.

Welsh, S.L. 1974. Anderson's flora of Alaska and adjacent parts of Canada. Brigham Young University Press, Provo, Utah. 724 p.

III. Scientific Nomenclature and Species Codes:

USDA, NRCS 1999. The PLANTS database (<http://plants.usda.gov/plants>). National Plant Data Center, Baton Rouge, LA 70874-4490 USA.

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